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: Fisher Sand and Gravel **SITE NAME:** Mehling 2

LOCATION: Section 13, 14 and 23, T3N, R58E **COUNTY:** Carter

DATE: July 20, 2009

PROPOSAL: Fisher Sand and Gravel proposes to mine sand and gravel from a 36.9-acre site located in rural Carter County. A grizzly and screen would be used. Access is directly from Highway 7. A fiber optic line is buried along the highway right of way.

A reclamation bond of $61,048 would be held by DEQ to ensure the final reclamation use of grazing land that would be accomplished by 2017.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:	The area is rolling hills sloping downward to the east. It is bisected by a swale that carries water during snowmelt and storm events. The elevation ranges from about 3380 feet above mean sea level (msl) to 3280 feet msl in the draw. Slopes are fairly gentle – under 10 percent. This area is in the Montana Plains portion of the Missouri Plateau Physiographic Province. In this particular area the Tertiary-aged Tongue River Member outcrops. Medicine Rocks State Park is a good example of the soft, find-grained sandstones that are cross-bedded because the material was wind deposited. Other strata are shale. Some gravels occur along old stream beds. Fisher intends to mine the area covered by the Creed-Gerdrum Soil Complex. These loams developed in alluvial material. They are deep and well drained. Test holes revealed sand down to 18 feet in one place. The swale where the facilities area would be placed has soils of the Orinoco-Weingart complex. These are well drained, silty clay loams developed in broken shale residuum. Mining would scalp off the tops of two ridges located north and south of the facilities area; no depression would be created. Annual precipitation is 12 to 15 inches. *Impacts:* There would be an irretrievable and irreversible removal of sand and gravel from the site. A small impact to the quantity and quality of soils would occur from salvaging, stockpiling, and resoiling

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	activities, but this would not impair the capacity of the soils to support full reclamation. There are no unusual topographic, geologic, soil, or special reclamation considerations that would lead to reclamation failure.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	Little Beaver Creek is about 2 miles east of the site. It flows northward. The swale through the center of the permit area carries water during large storm events and snow melt. The facilities area would be located on the sides of the swale. Fisher would place a culvert across the bottom of this swale to convey stormwater or snowmelt through the permit area. None of the test holes contacted water; the deepest was 18 feet. The nearest well is 0.8 mile north of the site and at a lower elevation. Its data are not applicable or relevant to this operation. *Impacts:* The applicant intends to mine the site by removing the top layers of the hills. It is estimated mining would lower the elevation of the hills by a maximum of 25 feet but the hills would still remain above the elevation of the facilities area in the swale. No depression would be created. The site would daylight to the east and possibly toward the swale. Based upon the topography, geology, test hole data, and design of the mine plan, it is highly unlikely that groundwater would be encountered. The plan states it would not encounter groundwater during mining. The proposed activities would have a minimal effect on the quantity and quality of the surface and groundwater resources.
3. AIR QUALITY	Air quality standards are based upon the Clean Air Act of Montana and pursuant rules and are administered by the DEQ Air Resources Management Bureau (ARMB). 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. 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. 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. *Impacts:* Air quality standards as set by the federal government and enforced by ARMB would allow minimal detrimental air impacts.
4. VEGETATION COVER, QUANTITY AND QUALITY	The site is native range, mainly grasses and forbs, with a small amount of sagebrush. The site would be reclaimed to grazing land. *Impacts:* No long term detrimental impacts to the vegetation would occur.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	Although the area is used primarily for pasture, it also supports populations of deer, antelope, rodents, song birds, coyotes, raptors, insects and various other animal species. Population numbers for these species are not known. *Impacts:* The proposed mine is expected to temporarily displace some individual species and it is likely that the site would be re-inhabited

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	following reclamation to similar habitat.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	Three species of concern have been found in the vicinity of this site – sage grouse, Narrowleaf Milkweed and Plains Phlox. Sage grouse require a healthy sagebrush habitat that does not exist at this site. Both plants were found in Medicine Rocks State Park a mile to the north. Narrowleaf Milkweed grows in dry, sandy soils such as those that occur at this site. Plains Phlox also grows in dry sandy soils, often associated with sandstone outcrops and Ponderosa pine savannah. Plains Phlox seems to thrive in disturbed areas – the largest occurrence being in a calving ground. *Impacts:* None of the listed species have been found on this site. The disturbance area would be small and large areas of similar or identical habitat surround the site. The possible impact to these species would be minimal.
7. HISTORICAL AND ARCHAEOLOGICAL SITES	The Montana State Historic Preservation Office (SHPO) 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. *Impacts:* 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 determined.
8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY	Midrivers Communications has marked the fiber optic lines and would move them as mining proceeded toward them. *Impacts:* None.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS	None.
10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	As seen on the aerial photo of the surrounding area, this is a very rural site. *Impacts:* None
11. AESTHETICS	Because of the very rural site, there is no need for noise or visual mitigation.
12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT	*Impacts:* New employment opportunities would be limited. The road construction job would only require temporary employment.
13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	*Impacts:* Agricultural production would be reduced on the site for the life of the permit. Then, grazing land would be reestablished.
14. LOCAL, STATE TAX BASE	Local, state and federal governments would be responsible for

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME	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.
15. DEMAND FOR GOVERNMENT SERVICES	None.
16. HUMAN HEALTH AND SAFETY	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.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES	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

19. Public Involvement, Agencies, Groups or Individuals contacted: Montana State Historical Preservation Office, Montana Natural Heritage Program, Montana Department of Transportation, local planning department.

20. Other Governmental Agencies which May Have Overlapping or Sole Jurisdiction: Required: Carter County Commission, Carter County Weed Control Board, MSHA and OSHA regarding mine safety.

Possible permits required from other programs or agencies: DEQ's Air Resources Management Bureau regarding air quality.

21. Regulatory Impact on Private Property: The analysis done in response to the Private Property Assessment Act indicates no impact. The Department does not plan to deny the application or impose conditions that would restrict the use of private property so as to constitute a taking.

22. Magnitude and Significance of Potential Impacts:

23. Recommendation for Further Environmental Analysis: [ ] EIS [X] No Further Analysis

EA Prepared By: Jo Stephen (Name) Opencut Mining Program Environmental Specialist (Title)

EA Reviewed By: Neil Harrington (Name) Chief, Industrial and Energy Minerals Bureau (Title)

_____ Date _____

Neil Harrington, Chief, Industrial and Energy Minerals Bureau, DEQ

Add Map on Photo with Half Mile + Surrounding Area.