

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: Hammond

LOCATION: Section 5, T1S, R29E

COUNTY: Yellowstone

DATE: July 14, 2009

PROPOSAL: Fisher Sand and Gravel proposes to mine and crush sand and gravel from a 35-acre site located in rural Yellowstone County. A grizzly, screen, and asphalt plant also would be used. Access is directly from Indian Creek county road about 1.5 miles from the Interstate.

A reclamation bond for \$125,751 would be held by DEQ to ensure the final reclamation use of grassland would be accomplished by 2014.

IMPACTS ON THE PHYSICAL ENVIRONMENT

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:	<p>The area is in rolling hills. The site slopes downward to the south. The elevation ranges from about 3940 feet above mean sea level (msl) to 3900 feet msl. Slopes are fairly gentle – under 10 percent. The southwest corner of the site falls off into a rather steep-sided draw with a spring and stock pond 200 feet away.</p> <p>This area is in the unglaciated Missouri Plateau Physiographic Province. In this particular area the high terrace gravels could be up to 30 million years old. They may lie in the ancient valley of the Shoshone or remnants of a much higher valley of the Yellowstone. The gravels rest upon the Fort Union Formation which is composed mainly of sandstones and shales.</p> <p>Fisher intends to mine the area covered by the Danvers and Shaak Soil Series. These silty clay loams developed in alluvial material. They are usually deep and well drained. In this area the underlying gravel is from 1 to 6 feet deep, as revealed in test hole data. The test holes were dug 18 to 20 feet deep and all but one stopped in gravel. The site would generally daylight to the south.</p> <p>Annual precipitation is 14 to 16 inches.</p> <p><i>Impacts:</i> 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</p>

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	<p>activities, but this would not impair the capacity of the soils to support full reclamation to grassland.</p> <p>There are no unusual topographic, geologic, soil, or special reclamation considerations that would lead to reclamation failure.</p>
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	<p>None of the test holes contacted water; the deepest was 20 feet. The gravels in this area are usually drained of water.</p> <p>Indian Creek is about 1 mile south of and 300 vertical feet below the site. It flows to the northwest. A small draw flows from the site about 1 mile to Indian Creek. A stock tank is located in this draw several hundred feet from the site boundary. Springs seep from the contact area between the gravel and the sandstone or shale. It is probably a spring of this type that feeds the stock tank.</p> <p><i>Impacts:</i> The estimated depth of mining would be about 35 feet. The site would generally daylight to the south. Based upon the topography, geology, test hole data, and design of the mine plan, it is highly unlikely that groundwater would be encountered.</p> <p>The proposed activities would have a minimal effect on the quantity and quality of the surface and groundwater resources.</p>
3. AIR QUALITY	<p>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. 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 installation. 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>
4. VEGETATION COVER, QUANTITY AND QUALITY	<p>The site is native range, mainly grasses and forbs, with a small amount of sagebrush. The site would be reclaimed to grassland.</p> <p><i>Impacts:</i> No long term detrimental impacts to the vegetation would occur.</p>
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	<p>The draw supports a stand of pines and juniper. 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.</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>
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	<p>Two species of concern have been found in the vicinity of this site – sage grouse and common sagebrush Lizard.</p> <p>Sage grouse require a healthy sagebrush habitat that does not exist at</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
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	<p>this site.</p> <p>The common sagebrush lizard is also commonly linked with sagebrush, rabbitbrush, bare ground, rock outcrops and open stands of juniper and ponderosa pine. Its year round habitat in Montana covers all of eastern and central Montana south of the Missouri River.</p> <p><i>Impacts:</i> None of the listed species have been found on this site. The draw outside the permit boundary has appropriate habitat for the lizard. Habitat disturbance for these two species would be small and large areas of similar or identical habitat surround the site. The possible impact to these species would be minimal.</p>
7. HISTORICAL AND ARCHAEOLOGICAL SITES	<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 determined.</p>
8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY	<p>A large power line crosses the facilities area from west to east. Near the eastern edge it slants southeastward across the mining area. No impact to the supports would occur in the facilities area and there are no poles in the mining area. The power lines are too high to be impacted by any equipment.</p> <p><i>Impacts:</i> None.</p>

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	<p>As seen on the aerial photo of the surrounding area, this is a rural site. Two residences are across the county road from the site – one is the landowner’s and the other is his rental unit.</p> <p><i>Impacts:</i> None.</p>
11. AESTHETICS	Soil berms would be built along the north boundary to act as visual and noise mitigation for the residences across Indian Creek Road.
12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT	<i>Impacts:</i> New employment opportunities would be limited. The road construction job would only require temporary employment.
13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	<i>Impacts:</i> Agricultural production would be reduced on the site for the life of the permit. Grassland would be reestablished after mining.
14. LOCAL, STATE TAX BASE AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME	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.

IMPACTS ON THE HUMAN POPULATION	
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	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 Historic 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: Yellowstone County Commission, Yellowstone County Planning Department, Yellowstone 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: Mitigation by the Openpit Mining Act reduces impacts to a level of insignificance.

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

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

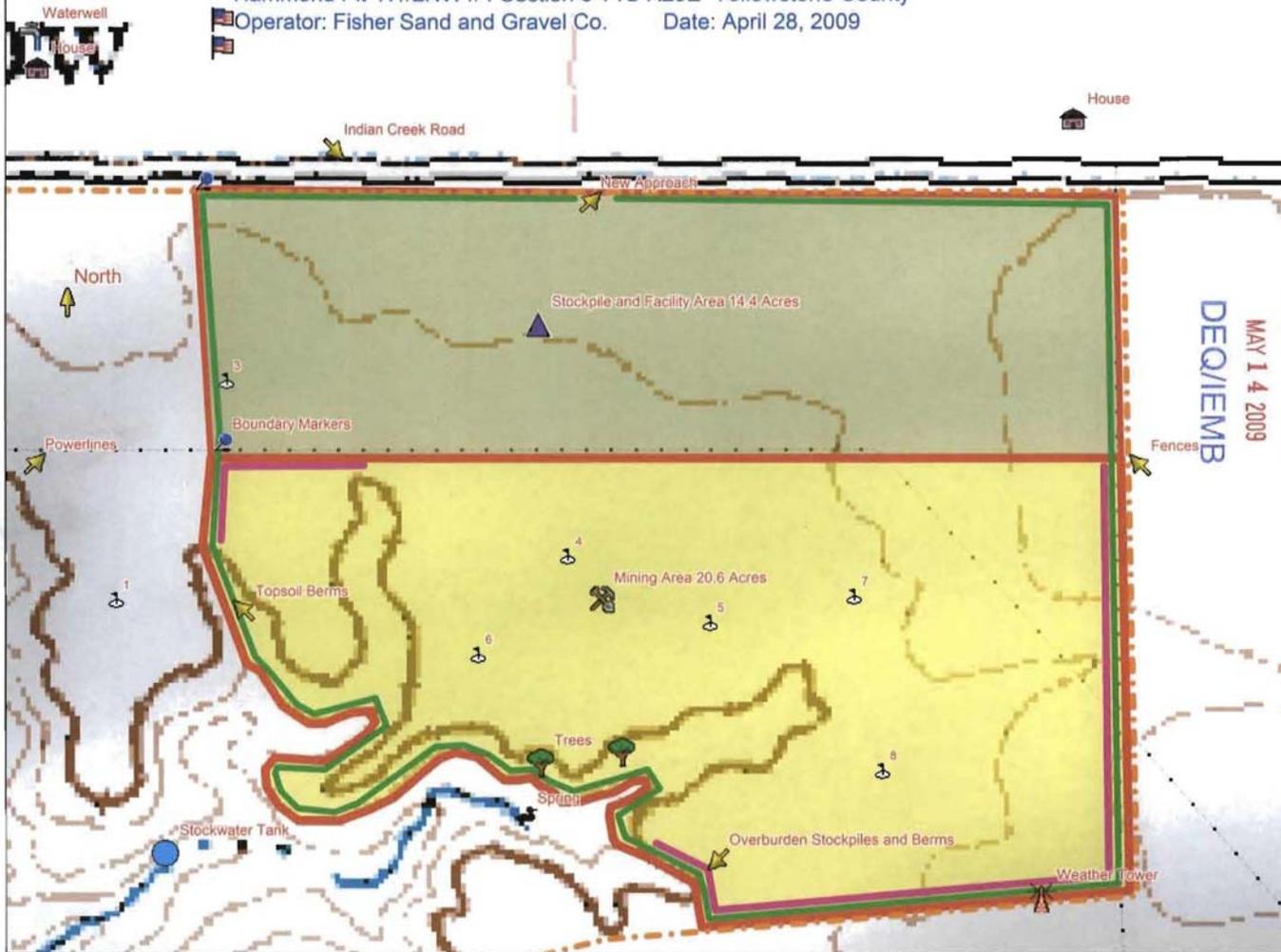
**EA Reviewed and
and Approved By:** Neil Harrington Chief, Industrial and Energy Minerals Bureau
Name Title

Signature

Date

Hammond Pit N1/2NW1/4 Section 5 T1S R29E Yellowstone County

Operator: Fisher Sand and Gravel Co. Date: April 28, 2009



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