

ENVIRONMENTAL ASSESSMENT

October 4, 2000

Project Name: Moran Site

Proposed Implementation Date: Existing operation

Proponent: Loyd Moran

Type and Purpose of Action: The applicant proposes to mine, stockpile and transport 80,000 cubic yards of sand and gravel from a 7.8 acre pit located 5 miles northeast of the town of Stevensville. The site is currently fully stripped and under mining progress. It will result in a leveled horse area or building site that will daylight out to the east. Only pit run sand and gravel are mined there is no processing equipment. The grade of the floor will be approximately 10 feet below the existing level of Cougar Lane, which will leave approximately a 40 foot high slope on the back side. The site will have a level floor, graded slopes of at least 3:1, be topsoiled and re-seeded back to grass.

Location: NE¼ SE¼ Section 12, T9N, R20W

County: Ravalli

N = Not present or No Impact will occur.

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

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactible or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?</p>	<p>[N] The proposed mine is located in rolling foothills of the Sapphire Mountains within the Bitterroot River Valley. The area was last inundated by Lake Missoula around 10,000 years ago. The deposit consists of stratified layers of glacial outwash sand and gravel that covers the deeper bedrock. The site is a native grassland area, which drains north and east.</p> <p>Topsoil, which averages 12 inches thick will be salvaged and stockpiled away from the pit, road and facility area. Following mining, grading and ripping, the soils will be replaced, disked and seeded back to grass.</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] The nearest pre-mining surface water is an adjacent irrigation ditch located well below the level of the mine, ¼ mile to the northwest. There is an intermittent drainage that is a tributary to the irrigation ditch located within several hundred feet of the east side of the site. The ditch and intermittent drainage will not be affected by mining.</p> <p>There are 60 water wells drilled and recorded in Section 12. They average a depth of 117 feet, have static water levels of 79 feet and have an average yield of 56 gpm. The mine will not affect these wells. The site will be lowered a depth of 40 feet on the uphill side which will not intercept groundwater.</p> <p>Special precautions will be taken to minimize possible contamination of the groundwater and surface water. All bulk fuel and lubricants will be kept outside the site. Portable equipment with fuel tanks such as dozers, loaders and trucks will be in various places within the facility. Any accidental spills or leaks from equipment will be excavated and disposed of. No trash other than clean fill will be disposed of at the site. With these precautions, the quality and quantity of the groundwater should not be adversely impacted.</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>[Y] Air quality will be degraded and there will be an increase in particulate matter. Dozers, loaders and trucking equipment typically cause dusty conditions in disturbed soil sites. Dust will be controlled around the site by water truck or sprinklers. No processing equipment is involved with this operation.</p>

<p>4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present?</p>	<p>[N] There are no known rare or sensitive plants in the site area. Vegetation has all been stripped. Vegetation in the general area is fescue and sagebrush, which covers 80% of the ground and will be removed and planted with species compatible with the proposed reclaimed use.</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] Although the area is used primarily for rural residential homes, it also supports populations of whitetail deer, rodents, song birds, coyotes, foxes, raptors, insects and various other animal species. Population numbers for these species is not known. There are rookeries of blue herons and nesting sites of ospreys and bald eagles along the Bitterroot River but none were identified at or near the site. The proposed mine is not expected to significantly degrade wildlife populations.</p>
<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] The Natural Heritage Program and site evaluations have not revealed any endangered or threatened plant or animal species that would be directly affected.</p>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p>[N] Although there are cultural values in the general area, this site has been previously disturbed by modern man, thus destroying the integrity of resources that may have existed. A surface reconnaissance did not discover any cultural, historical or archeological resources. The operator will give appropriate protection to any values or artifacts discovered in the affected area. If significant resources are found, the operation will be routed around the site of discovery for a reasonable time until salvage can be conducted. The State Historical Preservation Office will be promptly notified.</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>[Y] The site is located in a scenic, but not unique area. There will be a temporary deterioration of aesthetics while the operation is under way. However, reclamation will return the area to a visually acceptable landscape.</p> <p>The site is visible by homes in the local area and to traffic along Cougar and Grizzly Lanes. Normal hours of operation for the site are 7 am to 7 pm, Monday to Friday during the summer and shut down for long periods during the winter. Hauling from stockpiles or pit-run gravel from the pit may occur at any time.</p> <p>Noise levels generated by operating equipment at the pit are generally within the range of 60 to 90 decibels measured on-site, decreasing with distance. As a comparison, sound levels for ordinary activities such as close conversation at 60 decibels and music from a radio at 70 decibels are considered to be moderate. Levels above 90 decibels are severe, and prolonged exposure can lead to hearing loss. This noise is from loaders and truck traffic hauling to various projects. These impacts are intermittent and of relatively short duration.</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 nearby that will affect the project?</p>	<p>[N]</p>
<p>10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other studies, plans or projects on this tract?</p>	<p>[N]</p>

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[Y] Heavy equipment and facilities including trucks and loaders will create hazards, but the operator must comply with all MSHA and OSHA regulations. The operator must employ proper precautions to avoid accidents. Excessive and prolonged noise and light could increase stress for nearby residents and induce difficulty sleeping, but ongoing operations are not planned for nighttimes. Both of these effects may be considered harmful to human health if the activities are continuous. This proposed operation should not significantly affect human health.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[Y] The acreage listed in the Type and purpose of Action will be taken out of native grassland and put into industrial/commercial use. Upon completion of mining, the land will be returned to a horse arena or a building site.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N]
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N]
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc) be needed?	[Y] The operation will require periodic site evaluations by DEQ staff until such time as the site is successfully reclaimed to the required post-mining use. However, these evaluations are usually performed in conjunction with other area operations.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[Y] City/County zoning clearance has been obtained.
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?	[N]
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N]
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[Y] The area has generally been rural residential in the recent past. Locals will notice a change in the site as gravel is extracted. They will notice equipment working and truck traffic coming and going. Upon reclamation, the site will be reclaimed to a horse arena or homesites.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N]

