

**CHECKLIST ENVIRONMENTAL ASSESSMENT  
DRAFT  
February 26, 1997**

Project Name: Dirty Corner Site

Proposed Implementation Date: March 1, 1997

Proponent: Montana Department of Transportation

Type and Purpose of Action: The applicant proposes to mine, crush, stockpile and transport 100,000 cubic yards of sand and gravel from a 9.8 acre pit located 2 miles southeast of the town of Arlee. The estimated start-up date is March 1, 1997 and will result in a pit no deeper than 16 feet. The pit will be reclaimed to grassland and wildlife habitat after grading the slopes to at least a 3:1, replacing all topsoil, and re-seeding.

Location: NE¼ SW¼ Sec. 18, T16N, R19W

County: Lake

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. <b>GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:</b> Are fragile, compactible or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?</p>	<p>[Y] The proposed mine is located in the Jocko Valley which is a wide flat valley left from Glacial Lake Missoula which covered the area over 12,000 years ago. The rounded Jocko hills to the east and the Salish Range to the west are billion year old Precambrian rock of the Belt Series limestone and sandstone, as are the dramatically angular Mission Range to the northeast. Although these three mountain ranges are made of the same rocks, the Jocko hills and Salish Range were not as high, and covered completely with continental glacial ice, preventing the sculpting action of the higher alpine glaciers responsible for creating the dramatic, towering Mission Mountains.</p> <p>Up to 12 inches of fairly well drained, black silty loam topsoil with a few two to six inch rocks emerging at the surface, which overlies the glacial sands and gravels. Local terrace slopes demonstrate reasonable stability, and ripping after activities are complete should alleviate soil compaction. All soil material will be salvaged and stockpiled away from the affected land. Topsoil has been lost in areas where previous mining has occurred. Following mining, grading and ripping, the overburden (if any) and soils will be replaced, disced and seeded to stabilize the soil and prevent erosion. The overburden has exhibited the ability to support vegetative growth. Microbes are expected to re-colonize the soil due to the relatively short time that soils will be in stockpiles.</p>

<p>2. <b>WATER QUALITY, QUANTITY AND DISTRIBUTION:</b> 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>[N] The proponent may be required to obtain a Stormwater Discharge Permit from the Montana Department of Environmental Quality, to assure the protection of surface waters including the lake formed by mining. The nearest pre-mining surface waters are the standing water in the northwest corner of the permit area, the irrigation ditches located adjacent to the south side of the pit and the irrigation ditch located across the Hwy 93 to the north, which drains into the pit.</p> <p>The site will be mined to a depth of 16 feet. While this depth shouldn't intercept groundwater, there is residual irrigation water which forms standing water most of the summer.</p> <p>Groundwater is shallow in the area, and the sands and gravels display high permeability. There is an existing trailer residence located on an unpermitted parcel within the property owned by MDOT with a domestic water well that shows a static water level 47 feet below the ground.</p> <p>Special precautions will be taken to minimize possible contamination of the groundwater. All fuel and bulk lubricants will be kept out of the pit or within a lined, earthen-bermed fueling location. Portable crushers, loaders, trucks and other equipment with fuel tanks will be operating in various places within the permit. Any accidental spills or leaks from equipment will be excavated and disposed of. No waste or trash will be disposed of at the site. With these precautions, the quality and quantity of the groundwater should not be adversely impacted.</p> <p>Hydrologic impacts of the proposed expansion are not likely to cause any measurable change in the groundwater quality or water levels on property surrounding the site. This assumption is based on the fact that there will be no de-watering of the pit.</p>
<p>3. <b>AIR QUALITY:</b> 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. Crushers, screens and trucking equipment typically cause dusty conditions in disturbed soil sites. Water bars, road watering and other dust controls will be used as necessary.</p> <p>Crushers, screens and trucking equipment typically cause dusty conditions in disturbed soil sites. Applicable federal regulations for air quality which are implemented by the state are the Standards of Performance for New Stationary Sources, 40 CFR Part 60, Subpart OOO (Nonmetallic Mineral Processing Plants). Subpart OOO sets an opacity limitation on fugitive dust emissions from the gravel crushing and handling operations.</p>
<p>4. <b>VEGETATION COVER, QUANTITY AND QUALITY:</b> Will vegetative communities be permanently altered? Are any rare plants or cover types present?</p>	<p>[Y] There are no known rare or sensitive plants in the area. Vegetation consists of cottonwoods, willows, roses and water-tolerant grasses which lie on the bottom of the existing pit floor. Vegetation covers less than 20% of the ground in the area where mining will occur, but will be removed and planted with species compatible with the proposed reclaimed use. Some native seed will remain viable in the salvaged topsoil and will regenerate. Because of the short time frames, plant seeds and roots will remain viable in the soils. Under ideal conditions, native species from undisturbed, adjacent land will re-invade the site. There is a moderate infestation of spotted knapweed, a legally defined noxious weed.</p>

<p><b>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:</b> Is there substantial use of the area by important wildlife, birds or fish?</p>	<p>[N] The area is used primarily for wildlife. It supports populations of waterfowl, rodents, game and 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 along the Jocko River, and osprey nests in trees nearby. The creation of a pond may provide increased nesting opportunities for these species.</p> <p>Human use of the area has intensified in the past two decades with the increase in residential and commercial activity. The proposed mine is not expected to significantly degrade wildlife populations. The Natural Heritage Program literature search and site evaluations have not revealed any other endangered or threatened plant or animal species on site that would be significantly impacted. Seed head gall flies have been introduced to the tract to provide biological control of noxious weeds.</p>
<p><b>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</b> 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. Bald eagles are known to range all along the Jocko River Valley, but no nesting sites are known on or near the proposed permit area. No adverse effects are anticipated on the eagles as a result of this proposed action. Mining in the slough will temporarily disturb some wetlands, but will increase total wetland area and shoreline habitat.</p>
<p><b>7. HISTORICAL AND ARCHAEOLOGICAL SITES:</b> Are any historical, archaeological or paleontological resources present?</p>	<p>[N] Although there are important 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. The Salish/Kootenai Tribe has been contacted and no native American concerns were identified.</p>

<p>8. <b>AESTHETICS:</b> 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>There is and has been an alteration of the viewshed as a result of this existing and other current and historical sand and gravel mines in the area. The site is visible by homes in the local area and to traffic along Hwy. 93 where gravel pits are now common. Floodlights from dark period operations increase visibility and awareness of the operation.</p> <p>Noise levels 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.</p> <p>Because the crusher and other noise generating equipment would be located in the bottom of the excavation which is 16 feet below habitations to the north and northwest, effects from noise and light would be reduced. There is also noise from truck traffic hauling to various projects. These impacts are intermittent and of relatively short duration. There is a temporary deterioration of aesthetics while the operation is under way. Traffic along the highway will be able to see the operation, as it has for many years.</p>
<p>9. <b>DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:</b> 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. <b>IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:</b> Are there other studies, plans or projects on this tract?</p>	<p>[N]</p>
<p><b>IMPACTS ON THE HUMAN POPULATION</b></p>	
<p><b>RESOURCE</b></p>	<p><b>[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES</b></p>
<p>11. <b>HUMAN HEALTH AND SAFETY:</b> Will this project add to health and safety risks in the area?</p>	<p>[Y] Heavy equipment and facilities including trucks, loaders and crushers will create hazards, but the operator must comply with all MSHA and OSHA regulations. The operator will employ proper precautions to avoid accidents.</p> <p>Approval of this permit will increase the volume of legally extractable mineral at the site and will therefore increase the life of the mine in years. An increase in the rate of extraction resulting from marketing and increased demand for product could have a shortening effect on the life of the mine as well.</p> <p>Excessive and prolonged noise and light could increase stress for nearby residents and induce difficulty sleeping. Both of these effects may be considered harmful to human health if the activities are continuous. This proposed expansion is not expected to increase the levels or intensities of these impacts. It therefore should not significantly affect human health.</p>

	The operator will employ proper precautions to avoid accidents.
12. <b>INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:</b> 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 wildlife habitat and put into industrial/commercial use. Upon completion of mining, the land will be returned to its previous use.
13. <b>QUANTITY AND DISTRIBUTION OF EMPLOYMENT:</b> Will the project create, move or eliminate jobs? If so, estimated number.	[N]
14. <b>LOCAL AND STATE TAX BASE AND TAX REVENUES:</b> Will the project create or eliminate tax revenue?	[N] To this date it has not been shown that the current operation has resulted in a reduction in taxable value of property and it is not anticipated that this expansion would alter past assessments.
15. <b>DEMAND FOR GOVERNMENT SERVICES:</b> 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. <b>LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:</b> Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[Y] City/County zoning clearance has been obtained.
17. <b>ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:</b> Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N]
18. <b>DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:</b> Will the project add to the population and require additional housing?	[N]
19. <b>SOCIAL STRUCTURES AND MORES:</b> Is some disruption of native or traditional lifestyles or communities possible?	[N]
20. <b>CULTURAL UNIQUENESS AND DIVERSITY:</b> Will the action cause a shift in some unique quality of the area?	[N]
21. <b>OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:</b>	[N]

## 22. Alternatives Considered:

1. **Denial:** The pit would not be permitted and further mining would not occur at this location. Aggregate would be hauled from a greater distance increasing fuel use, gaseous emissions and project costs. The owner of the gravel resource would be

denied full utilization of its property at this time. Without a new permit the existing mining impacts will not be cleaned up and the DEQ will have no control over the methods nor timetables regarding reclamation of the site.

2. Approval of the permit with mitigating conditions: The Plan of Operation has been written with mitigating conditions. Mitigation measures include water protection, fuel containment, topsoil replacement and construction of more waterfowl and other wildlife habitat.

23. Public Involvement, Agencies, Groups or Individuals contacted:

State Historic Preservation Office, Montana Heritage Program, County Weed Control District, County Commissioners for zoning, Salish/Kootenai Tribe.

24. Other Governmental Agencies with Jurisdiction, List of Permits Needed:

Montana Department of Environmental Quality for Crusher Permit and Stormwater Discharge Permit; Mine Safety and Health Administration for safety permit; Montana Department of Labor & Industry, Bureau of Safety for safety permit.

25. Magnitude and Significance of Potential Impacts: Impacts are unlikely to be significant on the general environment because of the size and location of the project, and the pre-mine existence of an older, un-reclaimed gravel pit.

26. Regulatory impact on private property: The analysis conducted in response to the Private Property Assessment Act indicates no impact since this Plan of Operations would not require "Special Stipulations" in order to comply with the Opencut Mining Act.

Recommendation for Further Environmental Analysis:

EIS     More Detailed EA     No Further Analysis

EA Checklist Prepared By: Rod Samdahl  
Name

Reclamation Specialist  
Title

Approved By: \_\_\_\_\_  
Name Title

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Signature Date