

ENVIRONMENTAL ASSESSMENT

Project Name: Doane Site Proposed Implementation Date: 12/15/96
 Proponent: Don Doane

Type and Purpose of Action: The applicant proposes to expand his permitted acres from 3 to 16, to expand the pit toward the south to the natural gas pipeline, to eliminate areas reclaimed, and to increase the volume to be removed to 380,000 cubic yards.

Location: SE¼ Sec. 16, T30N, R20W County: Flathead

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>[Y] The proposed mine is located on a rolling glacial outwash terrace left by the last retreating glacier around 10,000 years ago. The deposit consists of stratified layers of alluvium and glacial outwash sand, gravel and cobbles that cover the deeper Tertiary valley fill. The billion year old Precambrian rock of the Belt Series sandstone, mudstone and limestone rocks surround the deposit in towering walls sculpted by alpine glaciers that form an intermountain, fault block basin known as the Rocky Mountain Trench. The Whitefish Range to the north, the Flathead and Swan Ranges to the southeast and the less dramatic Salish Range to the west surround this flat-lying valley that is generally pock-marked with sink holes created when large blocks of glacial ice were buried in the outwash and later melted.</p> <p>Up to twelve inches of fairly well drained, sandy clay loam topsoil and up to six inches of sandy overburden overlies the glacial sands and gravels, and local terrace slopes demonstrate reasonably good stability. All soil material will be salvaged and stockpiled away from the affected land. Following mining, grading and ripping, the soils will be replaced, disced and seeded to stabilize the soil and prevent erosion. Microbes will re-colonize the soil.</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>[N] There is no surface water in the permit area. Water quality in the area is very high with good porosity and permeability in the sands and gravels that provide excellent transmissivity. There are many commercial and domestic water wells in the immediate vicinity of the site that were drilled 20 to 100 feet in depth. The average yield is 30 to 50 gallons per minute. The site will be mined to a depth of 16 feet which is above the anticipated depth of the water table, estimated to be 50 feet below the surface.</p> <p>All fuel, lubricants and chemicals will be kept out of the permit area, and any accidental spills or major leaks from equipment operating in the pit will immediately be excavated and removed from the site. Therefore, the quality and quantity of the groundwater should not be 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>[N] This amendment will increase the size of the pit area but will not increase other impacts such as noise, dust, etc. above the levels currently in place under the existing permit.</p> <p>Cumulative Impacts - The crusher will be operating within a PM-10 air quality area. However, the crusher would be required to secure an Air Quality permit, abide by applicable regulations and still comply with air quality standards which are health-based in development.</p>

<p>4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present?</p>	<p>[Y] Ground vegetation consists of non-native pasture grasses with orchard grass and smooth brome the dominant species in pasture areas. Vegetation covers 100% of the ground and will be removed and planted again following mining. There is no record of threatened or endangered plants or animals, although the area is used by deer, elk, birds and small mammals. While all plant species will be destroyed during mining, they will be replaced following mining, and many native species will re-invade the site voluntarily by seed contained in the stripped topsoil and by transportation to the site by wind, water and animals.</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>[Y] The area is used primarily for grazing and hay production, but it also supports populations of deer, game and non-game birds, coyotes, foxes, rodents, raptors, insects and various other animal species. The mine site is frequented by those animals and they will be displaced as the mine expands. 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.</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] There are not expected to be any impacts on rare and endangered species from the proposed mining operation. Site evaluations have not revealed any other endangered or threatened plant or animal species.</p>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p>[N] There are important cultural values in the general area. This site has been previously disturbed by modern man, thereby destroying much of the integrity of resources that may have existed. 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] There will be a temporary deterioration of aesthetics while the operation is under way. The site is visible by homes in the local area and to traffic along Highway 2, but visibility will not be increased more than the existing gravel operation. Reclamation will return the area to a visually acceptable landscape.</p> <p>This amendment will increase the size of the pit area but will not increase other impacts such as noise, dust, etc. above the levels currently in place under the existing permit.</p> <p>The use of vegetated topsoil berms and preservation of trees where possible to reduce line of site visual negative impacts and sound deflection and absorption will subdue those impacts. In addition, concurrent reclamation of this operation when significant portions are mined out will limit the duration of added visual impact.</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>
<p>IMPACTS ON THE HUMAN POPULATION</p>	
<p>RESOURCE</p>	<p>[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES</p>
<p>11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?</p>	<p>[N] The amendment may extend existing safety and health risks for a longer time but will not increase the levels of impacts above current rates.</p>

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 agricultural/wildlife habitat and put into industrial/commercial use. Upon completion of mining, the land will be returned to its previous use.
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?	[N]
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?	[N]
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N]
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N]

22. Alternatives Considered:

1. **Denial:** The amendment would not be approved at this time but impacts would still occur at this location. The department would not have the expansion under permit and would have no bond to ensure reclamation.

2. **Approval of the amendment:** The Plan of Operation has been written with mitigating conditions. Mitigation measures include water protection, waste burial, topsoil salvage and seeded visual barriers.

23. Public Involvement, Agencies, Groups or Individuals contacted: None.

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

Montana Department of Environmental Quality for Air Quality 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 because the increase in acreage will not require an increase in equipment and/or activity. The cumulative effect of the two gravel operations in this area will likewise not be increased.

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 Openpit Mining Act.

Recommendation for Further Environmental Analysis:

EIS More Detailed EA No Further Analysis

EA Checklist Prepared By: Rod Samdahl Reclamation Specialist
Name Title

Approved By: _____
Name Title

Signature Date

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Revised, 2/25/92