

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name: Tutvedt site Proposed Implementation Date: May 15, 1996
 Proponent: Bruce Tutvedt

Type and Purpose of Action: The applicant proposes to expand his existing permit to mine, crush, stockpile and transport an additional 300,000 cubic yards of sand and gravel from a 19 acre pit located 4 miles north of the town of Kalispell. The estimated start-up date is May 15, 1996 and will result in a pit no deeper than 60 feet. The pit will be re-claimed to grassland after grading the slopes to at least a 3:1, replacing all topsoil and re-seeding.

Location: SW¼ SE¼ Sec. 23, T29N, R22W 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
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>[Y] The proposed mine is located on a rolling glacial 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.</p> <p>Up to 8 inches of fairly well drained, sandy loam topsoil 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, disked and seeded to stabilize the soil and prevent erosion. Microbes will re-colonize the soil.</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?

[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 settling pond used by the wash plant. The nearest pre-mining surface water is a glacial pothole depression located across the county road. It has held water in the past from irrigation waste water, but has been dry in recent years due to changes in irrigation practices. No impacts will occur as a result of this expansion.

Groundwater is deep in the area, and the sands and gravels display fair permeability. There are five water wells in section 23 that are between 90 and 800 feet in depth and yield between 15 and 30 gallons per minute.

Precautions will be taken to minimize possible contamination of the groundwater. All bulk fuel and lubricants will be kept within a lined, earthen-bermed fueling location. Other portable equipment such as crushers, loaders, dozers and screens with fuel tanks are located in various places within the facility. 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>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. 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. The operator must obtain air quality permits and abide by state air quality regulations. No additional impacts to the air will result from this expansion since it only increases the life of the mine, not the intensity of the operation.</p> <p>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 000 (Nonmetallic Mineral Processing Plants). Subpart 000 sets an opacity limitation on fugitive dust emissions from the gravel crushing and handling operations.</p> <p>Cumulative Impacts - There may be three or more crushers, various screens, wash plants, asphalt plants, trucks, loaders and others operating simultaneously in this area since there are two other permitted pits in close proximity to this one. The Schlegel pit is located adjacent and east of this site, and the LHC pit is located nearby and southeast of this pit. There are no homes or recreational attractions in this agricultural and industrial area. Cumulative impacts are not considered to be significant in this case.</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] There are no known rare or sensitive plants in the area. No mining will be done within 100 feet of any live stream, riparian or isolated wetland habitat areas. Native vegetation consists of planted pasture grasses which lie on rolling slopes. Vegetation covers 100% of the ground and 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 re-generate.</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 grazing, it is also supports populations of deer, elk, moose, black bear, mountain lion, waterfowl, rodents, song birds, coyotes, foxes, insects and various other animal species. Population numbers for these species is not known.</p> <p>Human use of the area has intensified in the past two decades with the increase in 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.</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. The Black Tern, a rare bird, has been spotted a mile northwest along the Stillwater River.</p>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: 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.</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>There is and has been an alteration of the viewshed as a result of other current and historical sand and gravel mines. The site is visible to traffic along the county road 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>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.</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>[Y] Heavy equipment and facilities including trucks, loaders, crushers, asphalt and wash plants will create hazards, but the operator must comply with all MSHA and OSHA regulations. The operator will employ proper precautions to avoid accidents. The approval of this permit will increase the rate and volumes of traffic and the equipment already existing in this area.</p>
<p>12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?</p>	<p>[Y] The acreage listed in the Type and purpose of Action will be taken out of agricultural/grazing and put into industrial/commercial use. Upon completion of mining, the land will be returned to its previous use.</p>

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] To this date it has not been shown that the current operations nearby have resulted in a reduction in taxable value of property and it is not anticipated that this permit would alter past assessments. The presence of an industrial site in the midst of an agricultural area has the potential to reduce the desirability of surrounding land as a location to live a rural lifestyle, and therefore the marketability of improved and unimproved real estate may be diminished for homesites as some prospective buyers would not purchase these properties.
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 DSL 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. Cumulative Impacts - The potential for three concurrent operations mining and processing gravel or asphalt, and all hauling on the county road exists. Signing and flagpersons would be useful in regulating traffic patterns.
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. This operation is in the West Side Zoning District zoned as AG-40
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: Pit would not be permitted and impacts 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 his property at this time.

2. Approval of the application with mitigating conditions: The Plan of Operation has been written with mitigating conditions. Mitigation measures include water protection, fuel containment, and weed and erosion control.

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

State Historic Preservation Office, Montana Heritage Program, County Weed Control District.

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

Montana Department of Environmental Quality for Air Quality 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 location of the project, the lack of residential development and the lack of unique wildlife habitat.

26. Regulatory impact on private property: The analysis conducted in response to the Private Property Assessment Act indicates no impact.

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

Montana Bureau of Mines and Geology
Water Well Log Data

04/26/1996

Location: 29N 22W 23 BA
Site Name: DICK KNOX
Depth: 0.0
Yield: 0.0
Static Water Level: 0.00
Pumping Water Level: 0.0

Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 0.00

Year drilled:
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Location: 29N 22W 23 BCD
Site Name: GROSSWILER CARL
Depth: 90.0
Yield: 15.0
Static Water Level: 30.00
Pumping Water Level: 0.0

Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 7.00

Year drilled: 1948
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Location: 29N 22W 23 CCC
Site Name: TUTVEDT BRUCE
Depth: 200.0
Yield: 30.0
Static Water Level: 100.00
Pumping Water Level: 160.0

Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
-2.00 168.00 6.00

Year drilled: 1987
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Location: 29N 22W 23 CCC
Site Name: SEMLER ROGER
Depth: 280.0
Yield: 30.0
Static Water Level: 0.00
Pumping Water Level: 0.0

Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
-2.00 278.00 6.00

Year drilled: 1993
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Location: 29N 22W 23 DDC
Site Name: FUNK LEROY & PATRICIA
Depth: 805.0
Yield: 50.0
Static Water Level: 290.00
Pumping Water Level: 560.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	-1.50	28.50	8.00	
	-2.00	228.50	6.00	
	591.00	789.00	5.00	

Year drilled: 1981