

CHECKLIST ENVIRONMENTAL ASSESSMENT
February 10, 1997

Project Name: Elk Hill expansion Proposed Implementation Date: March 15, 1997
 Proponent: Schellinger Construction
 Type and Purpose of Action: The applicant proposes to amend their existing permit to mine, crush, stockpile and transport an additional 7,500 cubic yards of sand and gravel from a 2.5 acre pit located 25 miles east of the town of Libby. The estimated start-up date is March 15, 1997 and will result in a pit no deeper than 16 feet. The pit will be reclaimed to grassland after grading the slopes to at least a 3:1, replacing all topsoil, and re-seeding.
 Location: NE¼NW¼ Sec. 28, T27N, R28W County: Lincoln

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 in a fault-blocked, glacial valley left over from the last retreating glacier around 10,000 years ago. This valley is a block-faulted feature that forms an east-west valley through the Salish Mountains between Flathead Lake and Libby. The 600 million to 1.5 billion year old Precambrian mudstone and sandstone of the Belt Series rocks surround the deposit in rounded mountainous terrain carved by receding glaciers.</p> <p>Up to 12 inches of fairly well drained, sandy silt loam topsoil 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. Following mining, grading and ripping, the overburden (if any) and soils will be replaced, disced and seeded to stabilize the soil and prevent erosion. Microbes are expected to re-colonize the soil due to the relatively short time that soils will be in stockpiles.</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>[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. The nearest pre-mining surface water is the Fisher River located ½ mile to the south, which will not be impacted directly by mining.</p> <p>The site will be mined to a depth of 16 feet which will not intercept groundwater. Depth to groundwater is unknown, but expected to be below the level of the pit floor.</p>
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	<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.</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 ponderosa pine and Douglas fir with associated grass and shrubs. 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. 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>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?</p>	<p>[N] The area is used primarily for grazing and it also supports populations of mule deer, whitetail 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. There are osprey nests in trees along the Clark Fork River. The proposed mine is not expected to significantly degrade wildlife populations. Seed head gall flies have been introduced to the tract to provide biological control of noxious weeds.</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. Bald eagles are known to range all along the Fisher 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.</p>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p>[N] There are no known cultural values in the general area. 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. Logging clearcuts and a hard rock mine are both visible from the highway as it passes by the site. Traffic along the road will be able to see the operation, as it has for many years.</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?	[N] The approval of this amendment would have little effect on the rate or volumes of traffic or the equipment used already existing under the current plan. Approval of this amendment will increase the volume of legally extractable mineral 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. The operator currently complies with all MSHA and OSHA regulations regarding heavy equipment and facilities including crushers, hot plants, trucks and loaders.
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 timber/grazing 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?	[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?	[N]
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]

