

## CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name: Hayes site Proposed Implementation Date: 5/5/96  
 Proponent: Perfect Concrete, Inc.  
 Type and Purpose of Action: The applicant proposes to mine, crush, stockpile and transport 7,600 cubic yards of sand and gravel from a 1 acre pit located 1 mile east of the town of Potomac. The estimated start-up date is May 5, 1996 and will result in a pit no deeper than 7 feet. The pit will be reclaimed to a commercial sawmill site after grading the slopes to at least a 3:1. Topsoil has been lost during previous mining.  
 Location: SE¼ SE¼ Sec. 18 & NE¼ NE¼ Sec. 19, T13N, R15W County: Missoula

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 outwash terrace left from 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 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 basin. The site is located in the foothills of the Garnet Mountain Range to the south with the southern end of the Swan Range to the north.</p> <p>No topsoil remains in this site, due to prior mining</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] 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 wet areas formed by prior mining. The nearest pre-mining surface water is an irrigation ditch which flows northwest, located 200 feet from the site and Union Creek which is located 1000 feet to the north which will not be impacted directly by mining.</p> <p>The site will be mined to a depth of 7 feet which will be 3 feet above high groundwater.</p> <p>Groundwater is deep in the area, and the sands and gravels display poor permeability. There are three water wells in Sections 18 and 19 that yield 2 to 25 gallons per minute and were drilled 230 to 260 feet deep.</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 except for those contained in mobile equipment. A portable crusher, trucks and loaders with fuel tanks will be located in various places within the site. 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>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 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>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>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. 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] Although the area is used primarily for mining and 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 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>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 along the Blackfoot 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. Several locations in the area have been reported to contain the sensitive Howell's Gumweed and Deer Indian-paintbrush but no vegetation exists in the proposed site at all.</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] 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 historical sand and gravel mining. The site is visible by homes in the local area and to traffic along the Potomac Road. 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. There is also noise from 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>
<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, 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.</p> <p>Approval of this permit 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.</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 permit is not expected to significantly affect human health. The operator will employ proper</p>

	precautions to avoid accidents.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N]
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 operation has resulted in a reduction in taxable value of property and it is not anticipated that this expansion would alter past assessments. The presence of an industrial site in the midst of an agricultural/rural residential 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 as some prospective buyers would not purchase these properties. The area proposed for mining has been used as a gravel source for many years however, so it could be assumed that because residential building has encroached around this site, those purchasers did not find the use objectionable.
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 two concurrent projects requiring pit run, processed gravel or asphalt, and both hauling on the Potomac 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.
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 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 amendment with mitigating conditions: The new Plan of Operation has been written with mitigating conditions. Mitigation measures include water protection and fuel containment.

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

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

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 proposed operation will be small in size and will last a short time. The resulting reclaimed area will be larger, but it will not degrade aesthetic character and wildlife habitat. The cumulative effect of two small gravel operations in this pit will likewise not be significant because of their location and size.

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

Montana Bureau of Mines and Geology  
Water Well Log Data

05/03/1996

PERFECT CONCRETE - HAYES SITE, 13N-15W-18DD & 19AA

Location: 13N 15W 18 C  
Site Name: CASE ARNOLD H.  
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: 1900

Location: 13N 15W 19  
Site Name: REARDON JIM  
Depth: 260.0  
Yield: 25.0  
Static Water Level: 19.00  
Pumping Water Level: 255.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	-2.30	18.00	6.00	
	10.00	260.00	4.00	

Year drilled: 1978

Location: 13N 15W 19 B  
Site Name: SELL REX & LINDA  
Depth: 230.0  
Yield: 2.0  
Static Water Level: 89.00  
Pumping Water Level: 230.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	0.00	30.00	6.00	
	20.00	230.00	4.00	

Year drilled: 1982