ENVIRONMENTAL ASSESSMENT
7/29/97

Project Name: Morris Site **Proposed Implementation Date:** 6/26/97
Proponent: Treasure State Concrete, Inc.
Type and Purpose of Action: The applicant proposes to mine and haul 40,000 cubic yards of sand and gravel from a pit located one mile north of the town of Bigfork. There will be 2 acres mined and disturbed for facilities and roads. The estimated start-up date is July 15, 1997 and will result in a pit that is level with the grade of the highway through town. The pit will be reclaimed to a commercial site after grading the backslopes to at least a 3:1, replacing topsoil on the slopes, and re-seeding the slopes to grasses.
Location: NW¼ NE¼ Section 25, T27N, 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**
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?	**[Y] The site is scenic but otherwise not unique. The existing mine is located in rolling foothills of glacial debris 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 northeast, the Swan Range to the southeast and the less dramatic Salish Range to the west surround this flat-lying valley.** **Up to 12 inches of fairly well drained, sandy loam topsoil with a few two to six inch rocks emerging at the surface 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 on the slopes, disked 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.**

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?	**[Y] There are 8 domestic water wells nearby in section 19 that range 200 to 500 feet in depth and yield an average of 20 gallons per minute. Groundwater is quite deep and is not expected to be effected by mining. The nearest major surface water is Flathead Lake located 1¼ mile to the southwest of the permit area. No potable water is expected to be adversely impacted.** **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.**
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	**[Y] Air quality will be degraded and there will be an increase in particulate matter. Dozers, loaders and trucking equipment typically cause dusty conditions in disturbed soil sites. The proponent must comply with air quality standards obtained from the Montana Dept. of Environmental Quality.**
4. VEGETATION COVERS, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present?	**[Y] Native vegetation will be removed during mining, and the ground will be re-planted with species compatible with the proposed reclaimed use. Some native seed will remain viable in the salvaged topsoil and will re-generate. Under ideal conditions, desirable native species from undisturbed, adjacent land will re-invade the site. There is an existing infestation of knapweed in the mine area, but not greater than the surrounding area.** **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. A literature search was done by the Montana National Heritage Program and no rare plants or cover types were identified and none were identified during a ground search.**
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	**[Y] Although the area is used primarily for residential and commercial purposes, it is also used by populations of deer, rodents, birds, 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.**

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?	**[N] There are not expected to be any impacts on those species from the proposed mining operation. 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.**
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	**[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. A cultural survey was done and revealed no resources.**
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?	**[Y] There will be a deterioration of aesthetics while the operation is under way. However, reclamation will leave the site in a landscape condition that is compatible with the surrounding area. There is and has been an alteration of the viewshed as a result of this existing sand and gravel mine; however, the viewshed has been extensively altered by other man made modifiers. The site is visible by homes in the local area and to traffic along the highway. Floodlights from dark period operations would increase visibility and awareness of the operation.** **Noise will increase from present levels when equipment is active. 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.** **These impacts are intermittent and of relatively short duration but are in addition to the noise created by the increased truck traffic hauling to various projects.**
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?	**[N]**

10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other studies, plans or projects on this tract?	**[N]**

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	**[Y] Heavy equipment and facilities including trucks, loaders, and dozers will create hazards, but the operator must comply with all MSHA and OSHA regulations. Excessive and prolonged noise and light could increase stress and induce difficulty sleeping. Both of these effects may be considered harmful to human health if the activities are continuous. This proposed operation is expected to create these impacts sporadically and for short periods; it therefore should not significantly affect human health.**
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 limited wildlife habitat and put into industrial/commercial use. Upon completion of mining, the land will be reclaimed to commercial property.**
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] The presence of an industrial site in the midst of a rural residential/commercial area has the potential to reduce the desirability 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 may be enhanced as commercial property along the highway as a result of mining. To successfully argue that taxable value has been affected, (decreased), the appeals process must be followed through the local and state level. To this date, there has not been a reduction in taxable value of property affected by opencut mineral mining.**

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. 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?	**[Y] This site lies within a Special Zoning District. The Flathead Regional Development Office has granted permission to mine gravel from the site, but has placed restrictions on the permit.**
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] While the surrounding area has built up as commercial and rural/residential, the gravel pit has been in existence for many years.**
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	**[N] This operation lies within a Special Zoning District of Flathead County and therefore many land uses abound. Its use is probably best characterized as commercial and rural residential because each of those uses exist to some degree.**
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	**[N]**

22. Alternatives Considered:

No Action: The pit expansion would not be permitted and impacts already existing would continue.

Approval of Application as submitted: The pit would expand and be reclaimed as requested.

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

State Historic Preservation Office, Montana Heritage Program, Flathead County Regional Development Office.

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

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 environment in general because of the size and location of the project, the relatively short duration of the project and the lack of unique wildlife habitat. However, the impacts may be more significant to those residences nearby.

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 [X] No Further Analysis

EA Prepared By: Rod Samdahl Title: Reclamation Specialist

Approved By: Jerry Burke Title: Program Coordinator, Opencut Mining Program

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Signature Date