ENVIRONMENTAL ASSESSMENT
December 18, 2000

Project Name: South Pit Amendment #4 **Proposed Implementation Date:** Project underway
Proponent: Donaldson Bros. Ready Mix
Type and Purpose of Action: The existing permit is being amended to include an additional 2.75 acres to the north, to release 2.75 acres of reclaimed pond, to include in the permit a 2.75 acre area mined within the river flood plain, to increase the mining depth to a maximum of 200 feet, to adjust the reclamation bond and to revise the permit map. The applicant proposes to continue to crush, screen, stockpile, and transport 8,873,333 cubic yards of sand and gravel from this 29.75-acre site located 5 miles north of Hamilton. The site would be mined to a depth of as much as 200 feet in some areas as he develops his pond. The reclaimed use would be a pond with pasture surrounding it. The site would be reclaimed by re-contouring the slopes, re-topsoiling the mine above the water, and reseeding the remaining above-water areas with grasses. The slopes of the pit above the water table would be reduced to at least 3:1.

Location: S½ Section 31, T7N, R20W **County:** Ravalli

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 their unusual geologic features? Are there special reclamation considerations?	**[N]** The proposed operation is located in a glacial alluvial valley in sands and gravels of the Quaternary to Recent geologic age. The proponent would mine to a depth of 200 feet in some areas which is well below the low water table. The maximum highwall in any one place will be only 20 feet and can stand almost vertical. Since the pit is located in the water table, slopes below the water may stand at the wet angle of repose, or about 15 to 30 degrees. There will not be any more than 500 linear feet of open highwall at any one time. The mine area would have all available soil stripped and salvaged, averaging about seven inches. The soil is a silty loam. Soil microbes should re-colonize the soils following replacement. There are no fragile, compactible, or unstable soils present, unusual geologic features, or special reclamation considerations. The reclaimed slopes will be reduced to a 3:1 or flatter angle above the water table. The mine has expanded into the Bitterroot River Floodplain without approval and a violation has been issued for that action. The 2.75 acres included in this permit on the east side represent the un-authorized mining and are being included in this permit for the purpose of enforcing reclamation standards on this part of the mine. No future plans are approved for further mining in this area.. No adverse effects are expected from mining within the 100 year floodplain.
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 Bitterroot River is located immediately east of the pit expansion but no permanent effects to the river channel are expected. The site would be mined with dozers, loaders, excavators and a dragline, Sauerman or other type of underwater dredge. There would be no discharge from the pit area. There are 36 water wells in Section 31 (see attached Water Well Report). The wells average 38 feet in depth, have static water levels of 13 feet and yield 66 gallons per minute. There is a general trend in the area for shallow, high-yield wells that provide drinking and agricultural water from sands and gravels associated with the shallow river valley aquifers. Precautions will be taken to maintain clean water in the mine.

	The mine intercepts potable water as it creates the pond, but requirements to protect the water quality are in place. No bulk fuel storage will be located on site. The proponent will not need to obtain a Stormwater Discharge Permit from the Montana Department of Environmental Quality, but will implement best management practices to prevent any off site erosion or sedimentation. The portion of the pit mined within the 100 year flood plain may be submerged at times by the river during very high water flows during snowmelt runoff. The river will not permanently capture the pit. The Bitterroot River Flood Plain Study, prepared for this proposed project by Water Rights, Inc. of Missoula, indicates that there will be a net improvement of the water quality downstream from the pit during times of high water due to the pit's design where it extends into the 100 year flood plain. According to the report, some of the excessive bedload of sand, gravel and rock from the fast-moving river during spring runoff will be deposited in the pit, thereby stabilizing some of the downstream channel migration and preventing streambank erosion. Therefore, negative impacts to the quality and quantity of the Bitterroot River water are expected to be minimal. Both the Conservation District (310 Permit) and the Army Corps of Engineers (404 Permit) were contacted and neither have stated any concern with this proposal. Both have stated that permits will not be necessary for this action. A Flood Plain Permit was obtained from The Ravalli County Planning Office.
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 not be degraded any more so than is already in place under the existing permit, but the proponent must continue to comply with air quality standards and an Air Quality Permit obtained from the Montana Department of Environmental Quality for the crusher.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present?	**[N]** Vegetation on the site of the proposed operation consists of planted pasture grasses including smooth brome, various wheatgrasses and quackgrass, and covers 80% of the ground up on the bench above the flood plain. Vegetation in the floodplain consists of willows, cottonwoods, grasses, roses and brush. Floodplain soils are spotty and are not conducive to permanent stands of grasses.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	**[N]** The site is utilized by deer and various other species of small mammals and birds. The area is used by eagles, herons, osprey and other raptors common to the Bitterroot River ecosystem. This site has been under operation for decades and some familiarity and tolerance with this long-term activity is apparent by these species. This amendment is not expected to have any permanent effect on the local wildlife.
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?	**[Y]** A ground search was conducted and no threatened or endangered species or identified habitats were found on the site.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	**[N]** A cultural resource ground survey and field inspection was conducted and no resources were found.
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]** The proposed expansion is similar to the existing operation, and is located on a river terrace between the Bitterroot River and Highway 93 in an industrial area, and is very visible to traffic along the highway and the river. The project is long termed with reclamation being planned for far into the future. The pit is visible to residences and other commercial businesses in the area.
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?	**[N]** There are no new safety concerns inherent with this operation. There will not be an increase in total traffic in the area because the old facility area will now be operated as a crusher site specifically for the gravel located in the South Pit. This will relieve the past practice of hauling pit run gravel from the North to the South pit for crushing, then hauling back out onto the highway as crushed product. The applicant must comply with OSHA and MSHA regulations and proper precautions will be taken to avoid accidents.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	**[Y]** The upper bench is currently vegetated in grasses suitable for some grazing although it is not being used for that purpose. This potential pasture will be taken out of grassland and put into industrial use. Following reclamation, it will be put into pond and grassland, mainly for wildlife 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]** The site will require periodic site evaluations, but these will be done in conjunction with other operations in the area.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	**[N]** 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. Alternative # 1: Approval as submitted. The amendment would be approved as submitted. This amendment has undergone substantial review and revision to reach its current form.

Alternative #2: Denial. The owner of the gravel resource would be denied full utilization of his property at this time.

23. Public Involvement, Agencies, Groups or Individuals contacted: Ravalli County Planning Office and Weed Management Board, Conservation District 310 Board, U.S. Army Corps of Engineers.

24. Other Governmental Agencies with Jurisdiction, List of Permits Needed: Montana Department of Environmental Quality for Air Quality Permit and Stormwater Discharge Permit; Mine Safety and Health Administration for safety permit, Flood Plain & Zoning permits through Ravalli County.

25. Magnitude and Significance of Potential Impacts: Impacts are unlikely to be significant because of the proposed operation's location and the lack of population density, critical wildlife or plant species or habitats.

Recommendation for Further Environmental Analysis:

[ ] EIS [ ] More Detailed EA [X] No Further Analysis

EA Checklist Prepared By: Rod Samdahl Title: Opencut Mining Program Reclamation Specialist, IEMB

Approved By: Jerry Burke Title: Opencut Mining Program Supervisor, IEMB

_____ _____

Signature Date