

FINAL ENVIRONMENTAL ASSESSMENT
February 3, 1999

Project Name: JTL North Site
Proponent: JTL Group, Inc.

Proposed Implementation Date: 1/1/2000

Type and Purpose of Action: The proponent has applied for a Mined Land Reclamation Contract that if approved would result in the mining, crushing, stockpiling, and transporting of 3,500,000 cubic yards of sand and gravel or related products from an 86-acre site to supply the local market. The proponent would operate a hot asphalt batch plant, a wash plant and a concrete batch plant. The proposal is located ¼ mile northwest of the town of Missoula. Final reclamation would be approximately December 2050. The mine would operate year round, generally Monday through Friday from 7 a.m. to 6 p.m. There may be times when a contract deadline is to be met, and under those circumstances the days and hours would be extended, except for the crusher, which is limited to the hours of 7a.m. to 6 p.m., 7 days per week. The estimated start-up date is January 1, 2000. The reclaimed use would result in a large, graveled, light industrial park or residential area with side slopes graded to angles of at least 3:1 or flatter. The slopes surrounding the finished site will be topsoiled and seeded to grass.

Location: N½ Sec. 6, T13N, R19W

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
<p>1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactable or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?</p>	<p>[N] The proposed mine is located in a gently south-sloping alluvial fan deposited from the Grant Creek drainage within the Clark Fork River Valley. The deposit consists of stratified layers of water-worked outwash sand and gravel that covers the deeper bedrock. The site is currently a low lying, dry pasture and a dump area that are located between the I-90 Interstate and Westview Trailer Park.</p> <p>Topsoil consists of a dark, organic layer of silty sandy loam that varies from 4 to 6 inches in depth which would be stripped and stockpiled. 40,000 cubic yards of the topsoil would be placed in stockpiles for reclamation of the site. Berms would be built with overburden gravel and covered with 6 inches of topsoil. These berms would be built prior to mining and would be along the north and south sides of the site to provide sight and sound barriers. The topsoil stockpiles and the berms would be seeded with grasses using the approved seed mixture and rate. In addition to grasses, shrubs and trees would also be planted on the berms. The berms would remain in place after the site has been reclaimed. Following mining and re-grading in forty or fifty years, topsoil would be placed, disced and seeded on the slopes of the graded pit walls.</p> <p>There are no fragile, compactable or unstable soils or unusual geologic features. The reclamation of the site poses no special reclamation considerations.</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?

[Y] The nearest surface water is Grant Creek located 1,000 feet southeast of the site. The creek would not be affected by mining.

The site would be mined to a depth of 80 feet or more but will stay at least 5 feet above groundwater. Then, the site would be backfilled as much as 40 feet in some areas with rejected gravel material to make a finished floor 50 feet below the original native ground level.

Groundwater in places is 85 feet below the highest point at the surface in the proposed pit area, and the sands and gravels display high permeability. There are domestic and deeper commercial/agricultural water wells in the area. Wells close by are drilled from 12 to 362 feet deep, yield 20 to 1,000 gallons per minute, and have static water levels of 43 to 91 feet.

Sample wells located in the north half of section 6:

WELL YEAR LEVEL	LOCATION DRILLED	DEPTH	YIELD	STATIC (GPM)	
Rose	NE4 NE4	12'	Unk	Unk	1997
Rose	NE4 NE4	16'	Unk	Unk	1997
Hayes	NW4 NE4	99'	100	43'	1988
Wheeler	SE4 NE4	78'	0	0	1945
Wheeler	NE4 NW4	80'	20	Unk	Unk
USGS	NW4 NW4	9'	0	0	1962
Lauoie	NW4 NW4	26'	0	0	1997
Wheeler	SW4 NW4	203'	600	83'	1973
Wheeler	SE4 NW4	192'	1000	66'	1965
M&S Const	SE4 SW4	202'	450	67'	1969
Western Mat	SE4	300'	70	89'	1990
Wheeler	NE4 SE4	362'	600	91'	1970

JTL would construct a 6" cased water well in the northwest part of the site capable of pumping 100 GPM to supply the operational needs of the operation. Proper procedures would be followed for filing water rights through the Water Rights Bureau of the DNRC.

Prior to the construction of a wash plant, the design of the plant would be submitted to DEQ and approval obtained.

Special precautions would be taken to minimize possible contamination of the groundwater. All bulk fuel and lubricants would be brought in daily to the site. If plans for fuel storage in the pit change in the future, a proper fuel containment structure would be engineered and plans submitted to the DEQ for approval, in advance of installation. Portable equipment with fuel tanks such as loaders, trucks, crusher and asphalt or concrete plants would be operating in various places within the facility. Any accidental spills or leaks from equipment would be excavated and disposed of. No waste or trash would be disposed of at the site. With these

<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] The site is not located within a Class I Airshed. Air quality would be degraded and there would be an increase in particulate matter and odor. Dozers, loaders, crushers and trucking equipment typically cause dusty conditions in disturbed soil sites and asphalt plants typically emit odors that may be offensive to some people. However, crushers and asphalt plants are regulated for dust and other emissions, and the equipment used must be tested and approved by DEQ. The proponent must also comply with any additional requirements of the Missoula City - County Health Dept.</p> <p>Haul roads leading to and from the site will be paved to prevent dust. Spray bars will be used on the crusher and transfer points, and water would be applied within the site as needed to reduce dust.</p>
<p>4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present?</p>	<p>[N] There are no known rare or sensitive plants in the site area. On the 53-acre pasture the vegetation consists mainly of brome, bluegrass, quack grass and knapweed. Vegetation covers 100% of the ground in the 53-acre pasture. Knapweed is the only vegetation growing on the 33-acre dumpsite. The infestation of knapweed in the on the dump area is a very serious.</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 pasture and a dumpsite, it also supports populations of deer, small and medium size mammals, song birds, raptors, insects and various other animal species. Population numbers for these species is not known. There are rookeries of blue herons and nesting sites of ospreys and bald eagles along the Clarks Fork River valley, but none were identified at or near the site.</p> <p>Human use of the area has intensified in the past three decades with 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.</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. There are no wetlands or species of special concern identified on the site or by the Natural Heritage Program.</p>

<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p>[N] A Cultural Resources Inventory was conducted by an archaeological consultant using 30 meter transects in the pasture area and 15 meter transects in the dump area. Nothing significant was discovered.</p> <p>Although there are 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. The operator would give appropriate protection to any values or artifacts discovered in the affected area. If significant resources are found, the operation would 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 would be a long-term change in aesthetics while the operation is under way. However, improvements in aesthetics may occur in the dump area, and reclamation will return the area to a visually acceptable landscape. Permanent berms would reduce impacts of both noise and light along the north and south sides of the site. The berms would be planted with grass, shrubs and trees, and would be irrigated and maintained for aesthetics.</p> <p>The site is visible by homes and businesses in the local area and to traffic along the Interstate and other roads. Hours of operation for the crusher would be 7 a.m. to 6 p.m., 7 days per week, and are controlled by Missoula County. The proponent's crusher can produce up to 10,000 tons of product during an 11 hour shift. The amount of product made during the shift depends on the type of product. Hauling from stockpiles or pit-run gravel from the pit may occur at any time. Mining and other aspects of the operation including hot asphalt batching could occur at any time.</p> <p>Lights and generators running for 24 hours per day could increase local impacts. A lighting plan will be required by the Missoula County Planning Office as a condition of zoning approval that will specify the height and shielding of light fixtures so as to mute the effects of bright lights.</p> <p>On-site noise levels generated by operating equipment at the pit are generally within the range of 60 to 90 decibels, but decrease with distance. As a comparison, sound levels for ordinary activities such as close conversation and music from a radio are 60 decibels and 70 decibels and are considered to be moderate. Levels above 90 decibels are severe, and prolonged exposure can lead to hearing loss. There is also noise from loaders and 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>

10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other studies, plans or projects on this tract?	[N]
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?	<p>[Y] Heavy equipment and operating facilities including scrapers, trucks, loaders and batch plants would create hazards, but the operator must comply with all MSHA and OSHA regulations. The operator must employ proper precautions to avoid accidents.</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 operation should not significantly affect human health and would operate under guidelines set by the Missoula County Department of Health.</p> <p>The site would be enclosed with an 8-foot chain link fence to prevent unauthorized entry.</p>
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[Y] 53 acres of that listed in the Type and purpose of Action would be taken out of agricultural/grazing, and 33 acres of dump site would be taken out of recent use as a junkyard, and put into light business or residential development.
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 this type of operation has resulted in a reduction in taxable value of property, and it is not anticipated that this project would alter past assessments. The presence of an industrial site adjacent to a residential area has the potential to reduce the desirability of surrounding land as a location to live until reclamation is completed, and therefore the marketability of improved and unimproved real estate may be temporarily diminished for homesites as some prospective buyers would not purchase these properties for that use. Conversely, development of a level graded site 86 acres in size adjacent to the Interstate with local access makes the site desirable for commercial businesses and may actually enhance property values.
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 would 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?	[Y] City/County zoning clearance has been obtained. The Missoula County Commissioners granted approval of JTL's request for Special District Rezoning on September 2, 1998.

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] The area has generally been used as idle pasture and a junkyard in the recent past. Locals would notice a change in the site as junk is cleaned up, topsoil berms are created and vegetated, and gravel is extracted. They would notice equipment working and truck traffic coming and going. Upon reclamation, a major portion of the site would be improved from its current condition and should improve land values in the area.
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:

A. Denial: The pit would not be permitted and impacts from mining would not occur at this location. The owner of the gravel resource would be denied full utilization of his property at this time, and the dump site would remain unimproved.

B. Approval of the application: The Plan of Operation has been written with mitigating conditions including water protection, soil salvage, and construction of aesthetic berms.

23. Public Involvement, Agencies, Groups or Individuals contacted: State Historic Preservation Office, Montana Heritage Program, County Weed Control District, County Commissioners for zoning, Water Rights Bureau of DNRC; six completed and signed Resident Notification forms were submitted; a public meeting was held by JTL Group, Inc. on April 1, 1998; Missoula County held a public meeting on September 2, 1998 concerning rezoning and conditions. This Environmental Assessment was published and comments were solicited prior to decision making as part of Opencut compliance with MEPA. A news release was sent out to the Missoulian Newspaper along with a Public Notice being placed in the Legal Notice Section of the newspaper. The ad was ran on January 12 and 15 and the public had to 5:00 P.M., Friday January 29, 1999 to submit comments. No comments were received.

24. Other Governmental Agencies with Jurisdiction, List of Permits Needed: Montana Department of Environmental Quality for Air Quality (crusher and asphalt plant) Permit and Stormwater Discharge Permit; Mine Safety and Health Administration for safety permit; Montana Department of Labor & Industry, Bureau of Safety for safety permit; Missoula County Planning Office for zoning; Montana Department of Natural Resources for the water well .

25. Magnitude and Significance of Potential Impacts: Impacts are unlikely to be significant on the general environment because of the lack of significant or threatened wildlife or habitat, and because of the measures in the Plan of Operations and conditions placed on the proponent by Missoula County. The site would be operated and reclaimed in phases and aesthetic soil berms with vegetation would be placed along the north and south sides of the operation. Impacts to groundwater quantity, quality and distribution would be negligible due to the fact that

