

## ENVIRONMENTAL ASSESSMENT

June 29, 2007

This environmental assessment (EA) is required under the **Montana Environmental Policy Act (MEPA)**. An EA functions to identify, disclose and analyze the impacts of an action, in this case operating a gravel pit over which the state must make a decision. MEPA sets no environmental standards even though it requires analysis of both the natural and human environment. This document may disclose many impacts that have no legislatively required standards or over which there is no regulatory authority. The state legislature has provided no authority in MEPA to allow the Department of Environmental Quality (DEQ) or any other state agency to require conditions or impose mitigations on a proposed permitting action that are not included in the permitting authority and operating standards in the governing state law, such as the Opencut Mining Act, the Clean Air Act of Montana, or any other applicable state environmental regulatory law. Beyond that, a company may agree to voluntarily modify its proposed activities or accept permit conditions.

The state law that regulates gravel-mining operations in Montana is the **Opencut Mining Act**. This law and its approved rules place operational guidance and limitations on a project during its life, and provide for the reclamation of land subjected to opencut materials mining. This law requires that a bond, cash deposit or other financial instrument be submitted to the state to cover the complete cost of reclaiming the site to its approved, post-mining land use.

A permit decision cannot be based upon the popularity of the project, but upon whether or not the proponent has met the requirements of the Opencut Mining Act, pursuant rules, and other laws pertaining to his proposed actions.

SITE NAME: Dan & Sue Nelson

APPLICANT: JTL Group, Inc.

LOCATION: SE and NE of Sec 9, T2S R10E

COUNTY: Park

**PROPOSED ACTION: JTL Group proposes to operate a large scale gravel operation about 2 miles east of the Yellowstone River crossing on Interstate 90, a mile south of interstate exit 337. The 99.1-acre site is located on the high bench above the Bainter Gravel pit located along Chicken Creek, and just east of the STS Gravel Pit. The company plans to mine, crush, and/or screen 12,000,000 cubic yards of sand and gravel. Other processing would include a concrete plant, asphalt plant, wash plant and pug mill. Development of the site would proceed in phases with the first phase being approximately 32 acres. Total depth of the pit would be about 80 feet. This would be accomplished by mining 2 or 3 tiers or levels.**

**The Company would access the site via the Chicken Creek Road and then build an access spur. During phase I the facilities area including the crusher, asphalt plant, stockpiles, etc., would be toward the north end of the site. Topsoil and overburden stockpiles would be located along the north and east borders to help mitigate noise and visual impacts. Future phases would allow the facilities to be placed on a bench within the pit.**

**This would be a large commercial pit serving both the private and public sectors. Large highway jobs could be bid out of this pit. Requested hours of operation would be 5 a.m. to 8 p.m., six days per week. However, should demand require it, portable crusher hours would be from 3 a.m. to 11 p.m., six days per week. Maintenance and fueling could occur at any time.**

**Reclamation would be completed to grazing land by December 2027. The reclamation bond for phase I is \$186,164.**

A: Significant Unavoidable Impacts B: Insignificant as a result of conditioned mitigation C: Insignificant as proposed  
 L: Long term Impacts S: Short Term Impacts

|   |  |  |   |   |   | <b>POTENTIAL IMPACTS</b> |   |   |   |   |   |
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|   |  |  |   |   |   | A                        | B | C | L | S | EXPLANATION   |
| <b>PHYSICAL ENVIRONMENT</b>                       |  |  |   |   |   |                          |   |   |   |   |   |
| 1. <u>TOPOGRAPHY</u>                              |  |  | X | X |   |                          |   |   |   |   | <p>The site is on the high, alluvial terrace south of Interstate 94, 2 miles east of Livingston. The bench is 150 feet above the interstate and 100 feet above Chicken Creek. While the access road rises the 100 feet up from Chicken Creek Road, the topography of the site is rather flat, sloping gently toward the north. This pit would be set back from the northern edge of the terrace.</p> <p>Mining would result in a large depression.</p>  |
| 2. <u>GEOLOGY</u> ; Stability                     |  |  | X | X |   |                          |   |   |   |   | <p>The site's alluvium consists of geologically recent gravels and cobbles that have washed down from the Absarokee Mountains. The mined alluvium would be mechanically altered and permanently removed from its present location. The majority of material would be used for construction projects in the general area. An unknown quantity of back-haul material from construction sites could be used in reclaiming the site.</p>  |
| 3. <u>SOILS</u> ; Quality, Distribution           |  |  | X |   | X |                          |   |   |   |   | <p>Soils at the site are a cobbly loam. They are very permeable. Topsoil and overburden depths vary from 0 to 6 inches and 1 to 13 feet, respectively. In general, the soil averages about 4 inches deep. Salvaged topsoil would remain in stockpiles for an unknown number of years. This is detrimental to the soil. Backhauled material can be very good reclamation material and would be used to augment soil amounts.</p> <p>Average annual precipitation is between 10 and 14 inches.</p>  |
| 4. <u>WATER</u> ; Quality; Quantity; Distribution |  |  | X |   | X |                          |   |   |   |   | <p>No springs, creeks, ponds, or irrigation ditches are located on the site. There are springs by the landowner's home along Chicken Creek 100 feet in elevation below the site. Chicken Creek is dry except possibly during heavy storm events. A stock water dam has been in place for many years upstream from the access road and the Bainter gravel site.</p> <p>The access road leaves Chicken Creek Road substantially upstream from the springs.</p> <p>It is not anticipated that mining to 80 feet would reach any groundwater. However, if groundwater were contacted, mining would remain above it.</p> <p>Water use is highly dependant upon the season of the year, weather, time of day, what equipment is operating, and normal start-up and shut-down time.</p> <p>JTL would drill one to several 35 gallons-per-minute (gpm) wells for normal operations. A wash plant requires more water than a 35 gpm well can produce. DNRC water-use rules do not allow water wells to be plumbed together to provide sufficient water. If JTL decides to operate a wash plant, it would apply for a large well from DNRC.</p> |

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|                         | A | B | C | L | S |   |
|                         |   |   |   |   |   | <p>For a normal 8 hour shift, basic pit operations including dust control and crusher operations could require about 8,000 gallons per day, or about 12 gpm. The pug mill, which would be used occasionally, could require another 22,500 gallons per day, or an additional 31 gpm. The second on-site well or a second 35-gpm well could provide this water.</p> <p>Operation of a 500 gpm capacity wash plant could require 240,000 gallons of water per day with about 160,000 being recycled from the wash ponds. About 110,000 gallons of makeup water, or a little over 150 gpm, would be required. Wash plants cannot be operated in sub-freezing weather.</p> <p>Asphalt solidifies around 150 degrees F. If any asphalt were to be spilled it would not migrate or contaminate groundwater. Asphalt truck beds are treated so the asphalt slips out easily and cleanly at the delivery point. The truck treatment area probably would be constructed of concrete or asphalt. It would slope inwardly and be filled with sand to absorb any spilled material. The sand would then be removed and properly disposed of.</p> <p>The fuel tank would be installed in accordance with state and federal berming and spill containment guidelines.</p> <p>There would be no measurable adverse impacts to water quality or quantity from operating this pit.</p>   |
| 5. <u>AIR</u> : Quality |   |   | X |   | X | <p>Air quality standards are based upon the Clean Air Act of Montana and pursuant rules. The air quality program is administered by the DEQ Air Resources Management Bureau (ARMB). DEQ has an Environmental Protection Agency (EPA)-approved air quality program. Permits and permit conditions are established to promote compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health and the environment.</p> <p>Fugitive dust is regulated by ARMB. Each major piece of equipment, crusher, and asphalt plant have individual permits with emissions limits. Fugitive dust is regulated by the opacity method. ARMB has been monitoring particulate matter in the Gallatin Valley for many years. This covers the cumulative impacts of all activities in the valley. Results from the monitoring site outside Belgrade have been consistently lower than federal and state standards, and air quality in the Gallatin Valley is considered to be in attainment of the ambient air quality standards, which were set at levels that will protect public health and welfare. Park County is generally downwind from Gallatin County and has a very high mixing capacity because of the wind patterns in the Yellowstone Valley.</p> <p>The crusher and asphalt plants are permitted by ARMB. To control dust, crushers are equipped with water spray bars. Asphalt plants are equipped with bag houses or a recycling water scrubber system. Fugitive dust from the floor of the facility area would be controlled with the use of water trucks or</p> |

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|   |  |  |  |  |  |                          |   |   |   |   | possibly an environmentally-approved dust suppressant agent. The access road may be paved in the future. Odor is not regulated by ARMB. An increase in diesel fumes from on-site generators and trucks would occur. The applicant has requested permission to operate an asphalt plant. Total odor in the vicinity would increase with operation of an asphalt plant. Air quality impacts would be minimal.   |
| 6. <u>UNIQUE, ENDANGERED, FRAGILE, or LIMITED</u> environmental resources |  |  |  |  |  |                          |   |   |   |   | There are no wetlands, nor unique or endangered species on site.  |
| <b>BIOLOGICAL ENVIRONMENT</b>   |  |  |  |  |  |                          |   |   |   |   |   |
| 1. <u>VEGETATION</u> ; quantity, quality, species                         |  |  |  |  |  |                          |   | X |   | X | This is a rangeland site with mostly grassland and some sagebrush. The proposed post-mine land use would be dryland vegetation, which at reclamation would replace the existing use.  |
| 2. <u>TERRESTRIAL, AVIAN, and AQUATIC</u> ; species and habitats          |  |  |  |  |  |                          |   | X |   | X | This site has habitat that seems to be attractive to antelope. A herd of 50 was observed just beyond the fence. There are no trees or forests on site or in the vicinity. Thus, there is no habitat for the Canada lynx. This site is dry and the Yellowstone River is 2 miles away. No habitat for Yellowstone cutthroat trout or long-billed curlew exists.<br><br>Mining would have minimal impact because of the relatively small area that would be disturbed. |
| 3. <u>AGRICULTURE</u> ; grazing, crops Production                         |  |  |  |  |  |                          |   | X |   | X | This site has not been farmed for a number of years.  |
| <b>HUMAN ENVIRONMENT</b>  |  |  |  |  |  |                          |   |   |   |   |   |
| 1. <u>SOCIAL</u> ; structures and mores                                   |  |  |  |  |  |                          |   | X |   | X |   |
| 2. <u>CULTURAL</u> uniqueness/diversity                                   |  |  |  |  |  |                          |   | X |   | X |   |
| 3. <u>POPULATION</u> ; quantity/diversity                                 |  |  |  |  |  |                          |   | X |   | X | The Park County population is growing. This pit would provide construction material for local developments.   |
| 4. <u>HOUSING</u> ; quantity/distribution                                 |  |  |  |  |  |                          |   | X |   | X |   |
| 5. <u>HUMAN HEALTH &amp; SAFETY</u>                                       |  |  |  |  |  |                          |   | X |   | X | Access would be controlled during operations. The proposed mine site is fenced with barbed wire. This fence could be improved to provide greater security and help impede trespass.   |
| 6. <u>COMMUNITY &amp; PERSONAL INCOME</u>                                 |  |  |  |  |  |                          |   | X |   | X |   |
| 7. <u>EMPLOYMENT</u> ; quantity, distribution                             |  |  |  |  |  |                          |   | X |   | X | Operation of the mine would add to the employment base in the area.   |
| 8. <u>TAX BASE</u> ; state/local tax revenue                              |  |  |  |  |  |                          |   | X |   | X |   |
| 9. <u>GOVERNMENT SERVICES</u> ; demand                                    |  |  |  |  |  |                          |   | X |   | X |   |
| 10. <u>INDUSTRIAL, COMMERCIAL</u>   |  |  |  |  |  |                          |   | X |   | X |   |

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|  |  |  |  |  |  | A                        | B | C | L | S | EXPLANATION  |
| and <u>AGRICULTURAL</u> activities   |  |  |  |  |  |                          |   |   |   |   |  |
| 11. <u>HISTORICAL and ARCHAEOLOGICAL</u>                                     |  |  |  |  |  |                          |   | X |   | X | Gar C. Wood and Associates conducted an on-site inspection of the site. Two flakes and a spent core were the only finds. The firm's findings and recommendation are that no significant sites exist or are likely to exist, and that archeological clearance be given. If during operations resources were to be discovered, activities would be halted, or temporarily moved to another area in the pit until the State Historic Preservation Office was contacted and the importance of the find was determined.   |
| 12. <u>AESTHETICS</u>  |  |  |  |  |  |                          |   | X |   | X | <p>No homes would be within 1,000 feet of the proposed locations of the crusher, wash plant, and asphalt plant locations. The landowner's home is along Chicken Creek. Two single family homes are upstream and to the east. One of those persons is a relative of the landowners. A quarter mile to the west is the STS Gravel pit which is along the Boulder Road, and just below the site is the Bainter gravel operation.</p> <p>Normal hours of operations would be from 5 a.m. to 8 p.m., 6 days per week. When demand warranted these hours could be expanded to 3 a.m. to 11 p.m., 6 days per week for double shifting the portable crusher. Maintenance and fueling could occur at any time.</p> <p>First phase development would require the facility area to be placed at the existing ground elevation. Soil and overburden berms would be placed to the north and east to inhibit noise and visual impacts. During subsequent phases these operations would be placed down in the pit</p> <p>The mine's truck traffic would be routed down Chicken Creek to access either the Interstate or frontage roads. The only homes along the route are the landowner's. The county road department's shop and access to the landfill are along this route. Also, the Bainter gravel operation and two residents upstream also use this route.</p> |
| 13. <u>ENVIRONMENTAL PLANS and GOALS</u> ; local and regional                |  |  |  |  |  |                          |   | X |   | X |  |
| 14. <u>DEMANDS on ENVIRONMENTAL RESOURCES</u> of land, water, air and energy |  |  |  |  |  |                          |   | X |   | X |  |
| 15. <u>TRANSPORTATION</u> ; networks and traffic flows                       |  |  |  |  |  |                          |   | X |   | X | <p>This material would be sold commercially.</p> <p>Mining activities vary by season of the year. During the winter the mine might shut down, or at least reduce work days and hours. During the long days of summer few work days would be skipped. Traffic would also vary considerably and exact numbers cannot be stated.</p> <p>In order to estimate the increase in traffic caused by JTL gravel trucks, the amount of gravel to be mined is divided by the number of years the mine is scheduled to operate, divided by the average number of work days per year, and again divided</p>   |

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|  | A | B | C | L | S | EXPLANATION   |
|  |   |   |   |   |   | <p>by the capacity of the trucks.</p> <p>In this case, 12,000,000 yards of material could be mined from this site. Over a 20-year life of mine, on average, about 600,000 cubic yards would be removed annually. Divide this amount by 312 work days (Monday through Saturday) per year and by 20 yard capacity trucks, and multiple by 2 for round trips. The mine would average about 192 truck trips or average daily traffic (ADT) per day.</p> <p>This number would fluctuate based upon season of the year, weather, and construction activity. In the summer it could be more, while during a cold winter the mine may not operate and no truck traffic would be generated.</p> <p>There are no traffic counts for Chicken Creek Road. The Bainter Backhoe pit is small and probably only generates 10 truckloads per day, on average. The two homes upstream would generate a total of 16 trips per day if using the state's subdivision norm. STS traffic uses the Boulder Road.</p> |

**REGULATORY IMPACT ON PRIVATE PROPERTY:** The analysis done in response to the Private Property Assessment Act indicates no impact. The Department does not plan to deny the application or impose conditions that would restrict the use of private property so as to constitute a taking.

**PUBLIC INVOLVEMENT:** Landowner, Natural Heritage Program, State Historic Preservation Office, Belgrade Planning Office. Copies of this EA were sent to two parties who requested an opportunity to review the EA prior to a permit decision. These parties were asked to submit any comments on the EA to DEQ by June 21, 2007. One party acknowledged receiving the EA and had no comments. The other party did not respond.

**OTHER GROUPS OR AGENCIES CONTACTED OR WHICH MAY HAVE OVERLAPPING JURISDICTION:** DEQ Air Resources Management Bureau, Mining Safety and Health, Montana Department of Natural Resources and Conservation, Montana Department of Transportation, Park County Commissioners, Park County Weed Board.

**ALTERNATIVES CONSIDERED:** Denial

**RECOMMENDATIONS CONCERNING PREPARATION OF AN EIS:** Unnecessary, No Significant Impacts

Prepared by Jo Stephen  
Reviewed by Neil Harrington