ENVIRONMENTAL ASSESSMENT

SITE NAME: **Coulson** APPLICANT: **Johnson Lane Materials**
LOCATION**: SW Sec 8, Lots 8 & 9 Sec 7, T1N R27E** COUNTY**: Yellowstone**

PROPOSED ACTION: **Johnson Lane Materials proposes to operate a commercial gravel, asphalt, and concrete operation from a 130-acre site north of Lockwood, off Coulson Road across the railroad tracks. Phase I would be about 60 acres and Phase II would expand mining toward the west an additional 40 acres. No disturbance is planned for the area farthest to the west. Products would be used for general public sales but could also be used for MDT projects. Impacts to air, the human environment (for example noise, dust, traffic), water consumption, and other similar environmental components or resources would be insignificant from a cumulative perspective because this site would replace the Johnson Lane Site (near-by gravel site) and the Concrete Materials operation (near-by concrete producer).**

Mining would occur in at least two phases. The 60-acre Phase I development would start with the 30-acre facilities area at the east side of the permit area and a 30-acre mining area in the center of the site. There is an existing main entrance; no access road is necessary. The scale, office, batch plant, and fuel tank would be on the upper northeast corner. The crusher, wash plant and asphalt plant would be on the lower level with all the stockpiles. Mining would advance from the facilities area toward the west. A dewatering trench would surround the mining area. Water would be pumped out onto the undisturbed western portion of the site or into a small pond for infiltration.

Reclamation would be complete by September 2025 and include a pond landscaped for wildlife use (possibly up to 70 acres in size) and grazing land. Except for a post-mine pond, the bond would cover the cost to reclaim this site to its pre-mine land use of grazing and pasture.

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

				POTENTIAL IMPACTS		
	A	B	C	L	S	EXPLANATION
PHYSICAL ENVIRONMENT						
1. TOPOGRAPHY			X	X		Mostly flat, flood plain in the Yellowstone River Valley. The 100-year floodplain elevation ranges from 3055 feet above mean sea level (msl) to 3057 feet msl toward the southwest. The north part of the proposed site is in the 100-year floodplain with the southwest and south boundary portions on a low rise above it. The area along the railroad is about 15 feet above that. Previous ground disturbances have occurred along the southeast and east part of the site. These activities included building a road berm and ditching to remove excess irrigation water from adjacent land. The southern portion of the facility area was excavated about 10 years ago and was artificially lowered below the flood elevation. That area may be raised if the permit was approved. Stage I of the plan occupies the east half of the site. The facility area would remain in the same location throughout the life of the project, while mining would proceed to the west.

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						The reclamation plan includes up to a 70-acre depression in the landscape. This area would fill with water approximately 18' to 20' deep.
2. GEOLOGY; Stability			X	X		Recent alluvial gravel.
3. SOILS; Quality, Distribution			X		X	Soils at this site are alluvial loams. The Haverson Series topsoils in this area are fairly shallow, from a few inches to 12 inches. They overlie a silty overburden in some places up to 3 feet deep, and then gravels down to the bedrock. Soil would be salvaged and placed in berms mainly along the south permit boundary which is above the floodplain. Excess overburden could be sold or used as backfill. Good soil salvage would result in minimal adverse impacts to this soil. Reclamation would be to a large pond with pasture land surrounding it. Average annual precipitation is about 15 inches.
4. WATER; Quality; Quantity; Distribution			X		X	Wells in the area generally go to the shale bedrock at approximately 3025 feet msl or about 30 to 50 feet deep depending on which terrace the well is on. The static water level below the 100-year floodplain ranges from 7 to 9 feet. Two wells are associated with the proponent's house on the upper bench. The Coulson Ditch passes through the east side of the site along the drop-off from the railroad tracks down to the floodplain. Johnson Lane Materials controls 62 shares of water (4,000 gallons per minute for nine months or over 4,000 acre-feet) from Coulson Ditch that can be used for agricultural or industrial purposes. The site would be located just south of the Yellowstone River. Over half of this area is in the 100-year floodplain. The 100-year floodplain rises in elevation from near the northeast portion of the site toward the southwest. There are no floodways crossing the site. Flood waters would back into the site from the downstream or north side. The wash plant and pond, the screen, and the crusher would be located in the floodplain. The asphalt plant and adjacent storage area would be above the 100-year flood elevation. Local regulations would allow the proposed mine plan excavations within the floodplain. Stockpiles or other similar non-mechanical impediments to water flow built or extended above the flood elevation are not allowed. It would be possible for low stockpiles to be placed on the mine area floor. A dewatering trench would be dug around the site. Water would be pumped from the trench onto undisturbed fields or into a 3-acre pond for infiltration. Because the trench would collect clean groundwater and the discharge would not directly enter the Yellowstone River, no discharge permit would be required. This dewatering system would allow the site to be mined with loaders and excavators. The Yellowstone County Floodplain administrator inspected the site on April 20, 2006. He agreed that the facility area would be usable if equipment such as the crusher was raised up 3 feet to keep any oil or grease out of the flood waters. The stockpiles in the facility area would not impede flood flow. The wash plant and settling pond would be located in the northern portion of the facility area. Because of the fairly clean gravels in this

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						general area, relatively small volumes of water and a small settling pond are adequate for the operation. Both the Mauritson and the Farley sites located about a half mile away operate using recycled groundwater from their settling ponds. The asphalt plant and truck washout area would be above the floodplain toward the south end of the facility area. They would be placed on a concrete slab sloping inward to a sand filled sump. Periodically, the sump would be cleaned out and that material properly disposed of. Waste asphalt and concrete would also be placed on a concrete pad to await recycling. The batch plant with its chemical storage and truck cleanout areas, and the fuel tank and containment would be on the upper northeast terrace 20+ feet above the water table and 10 feet above the floodplain elevation. There would be minimal impacts to surface or ground water quality or quantity from mining. Stormwater would be controlled on site. A pond left in the post-mine landscape would have insignificant impacts on the groundwater aquifer. Average evaporation from open surface water in Yellowstone County is about 34 inches per year. Evapotranspiration from irrigated alfalfa and pasture grasses is over 29 and 26 inches per year, respectively.
5. AIR; Quality			X		X	The crusher and asphalt plants would have air quality permits. Fugitive dust would be controlled with the use of water trucks. Air quality reduction would be minimal.
6. UNIQUE, ENDANGERED, FRAGILE, or LIMITED environmental resources						This site lies in the designated Yellowstone River Corridor. The majority of the site is farmed pasture; it is not prime native habitat. However, the rest of the site is riparian with mature cottonwoods. Many invasive plants, including three noxious weeds also reside there. Both the Western Hognose Snake and the Milk Snake are found in the area but prefer a sagebrush/grassland or ponderosa/savannah habitat which does not exist on this site. No bald eagle nest is within a mile of the site. The site also does not contain river channel or sandbars which provide habitat for the spiny softshell. Mining this site would have little effect on any species of special concern or scarce native habitat.
BIOLOGICAL ENVIRONMENT						
1. TERRESTRIAL, AVIAN, and AQUATIC; species and habitats			X		X	Since the site is in the Yellowstone River Corridor, it is good habitat for white tail deer, turkey, other upland game birds, and numerous small mammals. Disturbance at this site is mainly limited to a hayfield. There would be little incursion into the savannah or brushy portions of the site. A strip of thick undergrowth about 50 yards wide lies between the proposed mine disturbance and the river. A portion of the site lies adjacent to an undeveloped 120-acre BLM tract to the north.

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						Mining would have minimal impact because of the relatively small area of habitat that would be disturbed and the relatively short timeframe for disturbance.
2. VEGETATION; quantity, quality, species			X	X		Approximately 80 acres of the site consist of irrigated pasture/hayland planted to a mix of alfalfa and grasses. Approximately 20 acres consist of cottonwood/native grassland savannah. The remaining 10 acres have cottonwoods overlying thick brushy undergrowth. Approximately 10 acres were disturbed prior to mining to drain irrigation waste water and are not very productive. This acreage has some cattails but is generally just cobbly ground, and is not a wetland. Mining would impact the area over the long term. The hayfield would be disturbed. Reclamation calls for a 70-acre pond for use by wildlife and growth of vegetation commensurate with lots of water and grazing land. The pond would provide a different type of habitat, while about 30 acres would be reclaimed to grazing and irrigated pasture.
3. AGRICULTURE; grazing, crops, production			X	X		Mining would result in the permanent loss of grazing and hay production on about 70 acres of land. Although the land could have been irrigated it has not been in about 10 years. Some of the field has been disturbed and soils were not replaced. This dryland field's average production of about a half ton of hay per acre per year would be lost.
HUMAN ENVIRONMENT						
1. SOCIAL; structures and mores			X		X	
2. CULTURAL uniqueness/diversity			X		X	The general vicinity includes the railroad with a siding and loadout facility, several industrial companies, and a zoned heavy industrial area. Ranch lands and a small subdivision are scattered throughout the adjacent areas. Much of the land to the south is occupied by active, commercial gravel mining operations.
3. POPULATION quantity/diversity			X		X	This area is not being developed for subdivision, although several of the gravel mining operations have residential development included in their reclamation plans.
4. HOUSING; quantity/distribution			X		X	
5. HUMAN HEALTH & SAFETY			X		X	With control of air emissions, mining would not cause adverse health effects to local residents.
6. COMMUNITY & PERSONAL INCOME			X		X	
7. EMPLOYMENT; quantity, distribution			X		X	This project would result in permanent employment for 10 to 15 persons, depending on the season. In addition, about 20 other persons in construction, trucking and landscaping would rely heavily on purchases from this site for their livelihood.
8. TAX BASE; state/local tax			X		X	
9. GOVERNMENT SERVICES;			X		X	

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10. INDUSTRIAL, COMMERCIAL and AGRICULTURAL activities			X		X	
11. HISTORICAL and ARCHAEOLOGICAL			X		X	A walkover of the area did not reveal any artifacts or signs of occupation. If during operations resources were to be discovered, activities would be halted and temporarily moved to another area until SHPO was contacted and the importance of the site was determined.
12. AESTHETICS			X		X	During the county's review of the plan of operations for its floodplain permit, the county published a legal notice in the Billings Gazette and mailed letters to 8 neighbors. No comments were received. One neighbor living within 1,000 feet of the proposed permit boundary filled out a Resident Notification form. There were no comments and he did not request an EA. One home is located about 600 feet south of the proposed permit boundary and 1,000 feet from the proposed asphalt plant site. The nearest home, at the northeast, is owned by the operator and would be converted into the scale house and office. Two other trailers are located about 700 feet to the north. A subdivision is located to the east of the railroad tracks and Coulson Road. The tracks are raised several feet above the surrounding land. They provide both a visual and noise break from the proposed operations. With the exception of the batch plant, scale and fueling station, all other operations would be 15 or more feet below the railroad tracks. In addition, trains are often waiting on the siding for the coal loadout facility about a half mile past the site. Noise associated with the coal operation is substantial. Plans to build a rail spur to Broadview are proceeding. If and/or when that project is completed, the coal trains would no longer use this facility. However, the siding would remain and other activities would continue.
13. ENVIRONMENTAL PLANS and GOALS; local and regional			X		X	
14. DEMANDS on ENVIRONMENTAL RESOURCES of land, water, air and energy			X		X	
15. TRANSPORTATION; networks and traffic flows			X		X	The proposed operation is to the south of the nearby residents. Traffic would not go past their homes. This gravel pit would generate an average of 60 truck trips per work day. This is calculated by dividing the 3.5 million cubic yards of gravel by 20 yards per truck by 312 work days per year by 19 years, then multiplying by 2 for round trips. Employees would generate another 20 to 30 trips per day going to and from work. These average numbers would be larger during the construction season

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						and could decrease to zero during the winter. Right now, a large number of coal trucks use Coulson Road daily. It takes a minimum of 400 over-the-road trucks to load a 100-car unit train. These trucks do go past the local residents to get to the rail loadout.

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

OTHER GROUPS OR AGENCIES CONTACTED OR WHICH MAY HAVE OVERLAPPING JURISDICTION: Air Resources Management Bureau, Mining Safety and Health, MT Dept. of Transportation, Yellowstone County Commissioners, Yellowstone County Weed Board, Yellowstone Floodplain Administrator

ALTERNATIVES CONSIDERED: Denial, Approval, or Approval with Stipulation.

Approval with Stipulations. The plan of operation was written in compliance with the Opencut Mining Act, and contains mitigating conditions that protect the natural environment and ensure reclamation of the site. Other mitigation included in the plan of operation pertains to visual and noise mitigation, water protection, and waste disposal. In addition, based upon analysis in this document, three stipulations will be added to the permit concerning water monitoring and a spill contingency plan.

Stipulations are:

1. In consultation with the Department, a groundwater monitoring plan must be submitted for review and approval by the Department within 60 days of permit issuance. Monitoring wells must be installed before January 1, 2007. Ground water quality must be tested before operations begin, and at a frequency thereafter to be determined by the Department. Water levels must be monitored monthly, or possibly more frequently based upon site specific conditions and mining activities.
2. A spill contingency plan must be submitted for review and approval by the Department within 60 days of permit issuance. At a minimum, this plan must delineate emergency actions, equipment available and its location onsite, personnel, and staff/agency phone numbers.
3. The spill contingency plan, a copy of the plan of operation, and other necessary permits must be kept on-site.

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

APPROVED BY: _____ DATE: _____

Prepared by Jo Stephen, October 2006