11-21 00179.70

EXPANDED CHECKLIST ENVIRONMENTAL ASSESSMENT

COMPANY NAME: Shumaker Trucking & Excavating Contractors, Inc.
LOCATION: 4.7 miles south of Fort Shaw, MT
PROPERTY OWNERSHIP: [ ] Federal [ ] State [x] Private

PROJECT: Fort Shaw Quarry
COUNTY: Cascade
OPERATING PERMIT No. 00179

TYPE AND PURPOSE OF ACTION: On May 10, 2011 Shumaker Trucking & Contractors, Inc. (Shumaker) submitted an application to the Montana Department of Environmental Quality (DEQ) for an operating permit for the Fort Shaw quarry. The quarry is currently operated under a Small Miner Exclusion Statement (SMES) but cannot stay under five acres of disturbance, and therefore an operating permit is required. The quarry is located in Section 35, Township 20 North, Range 2 West, in Cascade County, about 4.7 miles south of Fort Shaw, MT.

The quarry rock is shonkinite, a hard, dark igneous rock that is used for aggregate and riprap. Shonkinite has been used in central Montana for various road, railroad, and construction projects as a source of aggregate and rip rap.

The application is for a permit area of 79.6 acres, with 35.6 acres to be disturbed over the life of the mine, which is estimated to be about fifty years. Mining has taken place at the site for the last 18 years under a SMES. The total disturbance, including what has already been disturbed, would be about 16 acres over the next five years.

Equipment used to quarry the shonkinite would likely consist of loaders, dozers, articulated trucks, and excavators. There would also be conveyors, a portable screen/crushing plant, a pugmill, and possibly a portable asphalt plant. Removal of shonkinite would require blasting. This would be performed about twice a year by a certified blaster. Blasting products would not be stored on site.

Asphalt production would be limited from 6 am to 7 pm to minimize disturbance to neighbors. Wind in the area would minimize impacts from asphalt production odors. Work at the quarry and hauling from the site would occur during daylight hours, usually from 6 am to 7 pm, Monday through Saturday. The number and type of trucks would vary, and may require up to 100 truckloads per day during periods of peak activity.

DEQ must review the application, evaluate the potential impacts, and decide if it complies with the Montana Metal Mine Reclamation Act (MMRA) requirements, and the Administrative Rules of Montana 17.24.119.

PROPOSED ACTION: The site has been mined for the last 18 years under a SMES. The operator cannot stay under five acres of disturbance at any one time and therefore must obtain an operating permit. The operating permit would allow the quarry to continue to be worked, with total disturbance, including what has already been disturbed, of about 16 acres over the next five years and up to 35.6 acres over the life of the quarry.

The material from the quarry would be used for aggregate and rip rap. The processing plant would consist of screening and crushing equipment, and may include an asphalt plant. The on-going operations would continue as before, but under an operating permit as the site would be expanded. There would be an area set aside for screening and processing rock, a turn-around for trucks, soil and growth medium stockpiles, and product stockpiles. Water for dust control would be brought in. Storm water would be contained on site. On issuance of an operating permit a

reclamation bond would need to be posted that would cover all disturbances; past, present, and proposed.

The project would employ up to eight people at the quarry. The quarry would normally operate from Monday through Saturday, 6 am to 7 pm, on an as-needed basis.

CHECKLIST ENVIRONMENTAL ASSESSMENT

Environmental Assessment (EA) Legend:
N = Not present or No Impact will occur.
Y = Impacts may occur (explain under Potential Impacts).
NA = Not Applicable

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	[N] The rock to be removed is shonkinite, a dark, igneous rock studded with blocky crystals of glossy black augite. The shonkinite intruded as blisters of magma that swelled beneath the Eagle sandstone, a formation of late Cretaceous sedimentary rock. Erosion has removed the sandstone leaving the more resistant shonkinite standing in high erosion relief. The shonkinite is non-acid producing, and is considered to be an excellent product for aggregate and rip rap. Skonkinite is a hard rock that has been used for many years in central Montana for various road, railroad, and construction projects. Soil in the area ranges from 0 to 36 inches. Soil was not salvaged in the past. In the future, soil and overburden would be salvaged from new facility and mine areas. Approximately 1,000 cubic yards could be salvaged over the next five years. The site is composed of four soil types; the Castner-Perma-Rock outcrop complex, Cheadle-Hilger complex, Binna-Evanston complex, and a minor area of Fairfield loam. The predominant soil type (covering about 75 percent of the land area and where most of the disturbance from mining would occur) is the Castner-Perma-Rock outcrop complex. The Castner soil is found on slopes of 10 to 60 percent, is well-drained, and ranges from a cobbly loam to an extremely channery loam, with a total depth of up to 16 inches. The Perma soil is found on slopes of 10 to 60 percent, is excessively drained, and ranges from a very cobbly loam to an extremely cobbly sandy loam with a total depth up to 60 inches. The Cheadle-Hilger complex covers about 16 percent of the land area. The Cheadle soil is found on slopes of 10 to 60 percent, is well-drained, and ranges from a stony loam to an extremely channery loam, with a total

IMPACTS ON THE PHYSICAL ENVIRONMENT	
	depth of up to 10 inches. The Hilger soil is found on slopes of 10 to 60 percent, is well drained, and ranges from a very stony loam to an extremely stony loam, with a total depth of up to 60 inches. The Binna-Evanston complex covers about 7 percent of the land area. The Binna soil is found on slopes of 5 to 10 percent, is well-drained, and ranges from a loam to a very gravelly loamy sand, with a total depth of up to 60 inches. The Evanston soil is found on slopes of 5 to 10 percent, is well-drained, and ranges from a clay loam to a loam, with a total depth of up to 60 inches. The Fairfield loam covers a minor area and is found on slopes of 4 to 8 percent, is well-drained, and ranges from a loam to a silty clay loam, with a total depth of up to 60 inches. The operator commits to salvaging as much overburden and soil as possible over the remaining life of the quarry. No soil was salvaged under the SMES. The operator assumes 1,000 cubic yards can be salvaged over the first five years of operation. The operator will place a minimum of 6 inches of soil/overburden over the facilities area, excepting product storage stockpiles left for the landowner.
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] There are no surface or groundwater resources present on the site that would be disturbed. Best Management Practices (BMPs), such as small settling basins and soil berms would be used to control runoff from precipitation events. No stormwater would exit the quarry disturbance area. The nearest well is located over 1,000 feet away. There would be minimal potential for nitrate residues from blasting to reach the water table. A tanker truck would bring water to the site for road maintenance and dust control. The estimated depth of mining would be less than fifty feet below the quarry floor. The estimated high water table is greater than fifty feet below the surface of the quarry floor.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N] An air quality permit for the site may be required for the asphalt plant and crushers. The asphalt plant and crusher would have their own air quality permits. Dust control would consist of spraying water during mining, screening, and hauling operations. Fugitive dust control BMPs would reduce emissions associated with traffic on access roads in the project area.

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4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[N] The existing vegetation is mostly bluebunch wheatgrass and skunkbrush sumac. Some noxious weeds exist. The operator would obtain a Cascade County Weed Control Plan or commit to hiring Cascade County to conduct weed spraying. A seed mix has been provided by DEQ for revegetating the site. Fertilizer will be applied at the time of seeding at the rate of 40 pounds of nitrogen, and 40 pounds of phosphorus, per acre. There are no known rare or sensitive plant species in the proposed disturbance area.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds, or fish?	[N] Mule and whitetail deer are found in the area. The quarry has been worked for over 18 years. No impacts to terrestrial, avian, and aquatic life and habitats are expected.
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] The amendment would not cause impacts to any threatened, endangered, or sensitive species or habitats. A review by the Montana Natural Heritage Program revealed two species of special concern that exist in the area, but not within the proposed permit boundary. A golden eagle was last observed in May of 2009 and a greater short-horned lizard was last observed in May of 1985. The rock ridges offer perching areas for golden eagles. The quarry offers potential habitat (sandy/gravelly soils) for the greater short-horned lizard. These habitat types are readily available in the Fort Shaw area.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological, or paleontological resources present?	[N] A records search by the State Historic Preservation Office indicated that there are no known cultural areas of concern in the proposed permit area. As noted in the application, the operator would provide protection for archaeological and historical sites if they are discovered.
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 area is a historic quarry site, in a remote area, with disturbances going back to at least 1960. The area has been quarried for the last 18 years under a SMES. Disturbed areas would be regraded and seeded, although highwalls would be left. While the facility area would be visible from Birdtail Creek Road that is within about a half a mile of the proposed permit area, the actual quarry would not be visible. Product stockpiles would be left for landowner use. Highwalls would have a height of up to one hundred feet, or more. Shonkinite is a hard rock with limited potential to ravel over time. During reclamation of the site rock would be pushed against the highwalls to minimize safety risks by creating toe berms. Overburden and soil would be spread and seeded. Any remaining product stockpiles would be left for subsequent use by

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	the landowner. A temporary asphalt batch plant may be set up on site for a particular contract. Asphalt production would be limited from 6 am to 7 pm to minimize disturbance to neighbors. All materials used to produce asphalt would be placed in containment areas to prevent loss of product. Wind in the area would minimize impacts from asphalt production odors through dispersion. Work at the quarry and hauling from the site would occur during daylight hours, normally from 6 am to 7 pm, Monday through Saturday, campaign style. The number and type of trucks would vary, and may require up to 100 truckloads per day during periods of peak demand. Noise would be generated as material is removed, sized, and loaded into haul trucks. The site, and all the land around it for a distance of more than one-half mile, is owned by one landowner.
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] Water would need to be brought to the site for dust control. Stock water would be hauled by a tanker truck to the site. There are no other active mining sites nearby.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	[N] There are no other activities in the area that would affect this project.

IMPACTS ON THE HUMAN POPULATION	
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] The project would use existing roads. One comment was received after the public notice of the application for an operating permit was published which expressed concern over wear and tear on the blacktop and gravel roads in the area. Historically, up to 100 truckloads per day have travelled along Highway 200, depending on contracts. No additional impacts from what currently exist are expected with approval of this operating permit.

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12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N]
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N] The current number of employees, up to eight people at the quarry site, is not expected to increase.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N] The project would allow employment for a small number of people to continue. This amendment would maintain or add to tax revenue.
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 Proposed Action would not impact government services.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N]
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] The Proposed Action would not impact any wilderness or recreational areas.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require	[N] The Proposed Action would not cause impacts to the density and distribution of population and housing.

IMPACTS ON THE HUMAN POPULATION	
additional housing?	
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N] Approval of the operating permit is not expected to cause impacts to social structures and mores.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N] Approval of the operating permit is not expected to cause impacts to cultural uniqueness and diversity.
21. PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	[N] The Proposed Action would not impact private property use.
22. PRIVATE PROPERTY IMPACTS: Does the proposed regulatory action restrict the use of the regulated person's private property? If not, no further analysis is required.	[N] The Proposed Action and Type and Purpose sections above identify the objectives of this environmental assessment.
23. PRIVATE PROPERTY IMPACTS: Does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives.	[Y] The Proposed Action and Type and Purpose sections above identify the objectives of this environmental assessment. See item 22 above.

IMPACTS ON THE HUMAN POPULATION	
24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N]

25. ALTERNATIVES CONSIDERED: NO-ACTION ALTERNATIVE (DENY THE APPLICANT'S PROPOSED ACTION): The No-Action Alternative would not allow implementation of the proposed amendment. This would mean that the quarry could not expand beyond the five acres of disturbance that is allowed under the SMES. Shumaker would have to reclaim the site to less than five acres.

26. APPROVE THE APPLICANT'S PROPOSED ACTION: The Proposed Action would allow additional disturbance over the five acre disturbed and unreclaimed limit imposed by the SMES as the quarry is expanded.

27. APPROVE THE AGENCY MODIFIED PLAN: No mitigations are proposed.

28. PUBLIC INVOLVEMENT: Legal notices of the receipt of an application for an operating permit were published in the Great Falls Tribune (May 26, June 2nd and 9th, 2011), and Helena Independent Record (May 25, June 1st and 8th, 2011) as well as a public news release. One comment was received that expressed concern over wear on the area roads. This comment is addressed under Section 11, Human Health and Safety. A public news release will be issued on the results of this EA. A legal notice concerning the application and availability of this EA will be published, and a public comment period provided.

29. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION: None.

30. MAGNITUDE AND SIGNIFICANCE OF POTENTIAL IMPACTS: There would be no significant environmental impacts associated with this proposal. As noted, there would be impacts to soil and vegetation on the disturbed acres. These acres, except the stockpile areas, would be reclaimed at closure. Indirect impacts, such as truck traffic to Highway 200 would continue.

31. CUMULATIVE EFFECTS: There are no other proposals in the area that would add to the cumulative effects from this proposal. The Savoy Quarry on the north side of Shaw Butte is operated under Operating Permit # 00077. It is currently less than five acres in size. It has been largely inactive for many years. No plans exist for expansion at this time.

RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS: The agencies have concluded that impacts from the proposed action would be minimal.

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

The DEQ has selected the Approve the Applicant's Proposed Action as the preferred alternative.

EA Checklist Prepared By:

Herb Rolfes, DEQ Operating Permits Section Supervisor

This EA was reviewed by:
Patrick Plantenberg, DEQ Reclamation Specialist
Warren McCullough, DEQ, Environmental Management Bureau, Chief

Approved By:

Warren D. McCullough 11/21/11

Signature Date
Warren D. McCullough, Chief, Environmental Management Bureau, DEQ

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