

## EXPANDED CHECKLIST ENVIRONMENTAL ASSESSMENT

COMPANY NAME: Shumaker Trucking & Excavating Contractors, Inc. PROJECT: Chinook S-Bar-B Quarry  
LOCATION: 14.3 miles southeast of Chinook, MT COUNTY: Blaine  
PROPERTY OWNERSHIP: [ ] Federal [ ] State [x] Private OPERATING PERMIT No. 00179

TYPE AND PURPOSE OF ACTION: On April 17, 2012 Shumaker Trucking & Excavating Contractors, Inc. (Shumaker) submitted an application to the Montana Department of Environmental Quality (DEQ) for an amendment to operating permit 00179 to include the Chinook Quarry. The quarry is currently operated under a Small Miner Exclusion Statement (SMES) but cannot stay under five acres of disturbance, and therefore it has to be amended into the Shumaker operating permit. The quarry is located in Section 27, Township 31 North, Range 19 East, in Blaine County, about 14.3 miles southeast of Chinook, 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 160 acres, with 52.5 acres to be disturbed over the life of the mine, which is estimated to be about fifty years. Historic mining has taken place at the site in the past, and since 2011 under a SMES. Current disturbance is about three acres. Total disturbance, including what has already been disturbed, would be about 22 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 by a certified blaster. Blasting products would not be stored on site permanently and only brought in when needed.

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 historically, and since 2011 under a SMES. Currently, about three acres have been disturbed. The operator cannot stay under five acres of disturbance at any one time and therefore must amend the site into Shumaker's existing 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 22 acres over the next five years and up to 52.5 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 from the landowner's stock water supply. Storm water would be contained in the permit area. On approval of this amendment a reclamation bond would need to be posted that would cover all disturbances; past, present, and proposed.

The project would employ from eight to eleven people, including five drivers. 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
<p>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?</p>	<p>[Y] 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. Shonkinite is a hard rock that has been used for many years in central Montana for various road, railroad, and construction projects.</p> <p>Soil in the area ranges from 0 to 60 inches. Soil was salvaged when the quarry operated under a SMES. In the future, soil and overburden would be salvaged from new facility and mine areas. Approximately 35,000 cubic yards could be salvaged over the next five years.</p> <p>The site is composed of two major soil types: the Bearpaw-Vida and the Castner-Perma-Rock Outcrop, and two minor soil types the Vida-Zahill and Bearpaw-Elloam. The predominant soil types (covering about 90 percent of the land area and where most mining disturbance would occur) are the Bearpaw-Vida (about 49 percent of the land area) and the Castner-Perma-Rock Outcrop (about 40 percent of the land area). Both the Bearpaw and the Vida are found on slopes of 4 to 8 percent, are well-drained, and are clay loams. They have a total depth of up to 60 inches.</p>

**IMPACTS ON THE PHYSICAL ENVIRONMENT**

The operator would salvage soil to an average depth of 24 inches over the first five years of operation. Some soil has already been salvaged under the SMES. The operator assumes 35,000 cubic yards can be salvaged over the first five years of operation. The operator would spread overburden and soil over disturbed acreage during reclamation to a depth of 24 inches, excepting the facilities area (about 2 acres) which would be left for use by the landowner. Some product storage stockpiles would also be left for the landowner.

The access road to the quarry has been improved. It would be maintained by the operator and would remain for use by the landowner at closure of the quarry.

The operator expects that the highwall may be up to 75 feet high at closure. The shonkinite in the area has been quarried to a depth of about 30 feet to date. The outcrops of shonkinite are not continuous and the area between shonkinite pillars is filled with unconsolidated rock and soil. The operator has proposed to leave a 75 foot highwall at closure.

DEQ would stipulate that the operator grade the unconsolidated materials between the pillars into the pit at closure to the extent practicable.

**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. Stormwater would not exit the quarry permit 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 current 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

[N] An air quality permit may be required for the asphalt plant and crushers. Asphalt plants and crushers normally have their own air quality permits. Dust control would consist of spraying water during

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regulations or zones (Class I airshed)?	<p>mining, screening, and hauling operations.</p> <p>Fugitive dust control BMPs would reduce emissions associated with traffic on access roads in the project area.</p>
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	<p>[N] The existing vegetation is dominated by silver sage and native bunchgrasses. No noxious weeds were found on the site during a MDEQ site inspection on November 6, 2011 and again on July 3, 2012.</p> <p>The operator has an approved Blaine County Weed Control Plan.</p> <p>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.</p> <p>There are no known rare or sensitive plant species in the proposed disturbance area.</p>
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds, or fish?	<p>[N] Mule and whitetail deer are found in the area. The quarry has been worked historically and for the last two years under a SMES. No impacts to terrestrial, avian, and aquatic life and habitats are expected.</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>[N] The amendment would not cause impacts to any known threatened, endangered, or sensitive species or habitats. A review by the Montana Natural Heritage Program revealed two species of concern that exist in the general area.</p> <p>The species are: the Greater Sage-grouse and the Iowa darter.</p> <p>The Greater Sage-grouse requires sagebrush which is not a dominant species in the proposed permit area. The habitat for the Iowa darter is not within the proposed permit boundary.</p> <p>Although not listed as a species of special concern, the quarry has the potential to provide perching habitat for Golden eagles.</p>
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological, or paleontological resources present?	<p>[Y] 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. A cultural report was submitted by the applicant for the site. One historic site and one archaeological site were discovered in the proposed permit area. Investigation of the sites revealed little in the way of artifacts. Both sites</p>

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	will be avoided. The S-Bar-B Ranch does not want the two sites to be disturbed (cultural report, page 10). However, the landowner reserves the right to allow disturbance of the sites to take place in the future.
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>[Y] The area is a historic quarry site, in a relatively remote area. The area has been quarried in the past, and since 2011 under a SMES. Disturbed areas would be regraded and seeded, although highwalls would be left. The facility and quarry areas would be visible from Cleveland Road (Route 240) that runs 2 miles east of the proposed permit boundary. DEQ would stipulate that the company reduce the highwall as described in Section 1 above.</p> <p>Highwalls would have a maximum height of about 75 feet. Shonkinite is a hard rock with limited potential to ravel over time. During reclamation of the site some 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 the landowner. DEQ would stipulate that the company reduce the highwall as described in Section 1 above.</p> <p>A temporary asphalt batch plant may be set up on site for a particular contract. Asphalt production would be limited to 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.</p> <p>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. Historically the number of truck loads leaving the site has ranged from zero to 100 truckloads per day during periods of peak demand.</p> <p>Noise would be generated as material is removed, sized, and loaded into haul trucks. There is only one other landowner within one mile of the proposed permit boundary.</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>[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.</p> <p>There are no other active mining sites nearby.</p>

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
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.

<b>IMPACTS ON THE HUMAN POPULATION</b>	
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] The project would use existing roads. Historically, up to 100 truckloads per day have travelled along Highway 2, depending on contracts. No additional impacts from what currently exist are expected with approval of this operating permit.
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 ranges from eight to eleven, which is not expected to increase with approval of this amendment.
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	[N]

IMPACTS ON THE HUMAN POPULATION	
effect?	
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 additional housing?	[N] The Proposed Action would not cause impacts to the density and distribution of population and 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.

**IMPACTS ON THE HUMAN POPULATION**

<p>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.</p>	<p>[Y] The Proposed Action and Type and Purpose sections above identify the objectives of this environmental assessment. See item 22 above.</p>
<p>24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:</p>	<p>[N]</p>

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.
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: One mitigation is proposed to minimize impacts of the highwall as explained in Section 1 above. The stipulation states: The operator must grade the unconsolidated materials between the pillars into the pit at closure to the extent practicable.
28. PUBLIC INVOLVEMENT: Legal notices of the receipt of an application for an operating permit were published in the Lewistown: *Lewistown News-Argus*, Havre: *Havre Daily News*, Billings: *The Billings Gazette*, Great Falls: *The Great Falls Tribune* for three successive weeks.
- 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. Highwalls would remain under the Proposed Action. Under the Agency-

Mitigated Alternative, the highwall would be reduced as explained in Section 1 above. Indirect impacts, such as truck traffic to Highway 2 would continue.

31. CUMULATIVE EFFECTS: There are no other proposals in the area that would add to the cumulative effects from this proposal.

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

EIS     More Detailed EA     No Further Analysis.

The DEQ has selected the Approve the Agency Modified Plan 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:**

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Signature

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

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Date

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