

EXPANDED CHECKLIST ENVIRONMENTAL ASSESSMENT

COMPANY NAME: E.S. Stone and Structure, Inc., P. O. Box 28, Ryegate, MT 59074

PROJECT: Building stone quarry and rock collecting sites.

PERMIT OR LICENSE: Amendment Application 005 to Operating Permit 00163

LOCATION: Site 17: North ¼ of Section 3, Township 7 North, Range 15 East in Wheatland County, about two miles south of Harlowton, MT; and

Site 18: Sections 25, 26, 27 and 28, Township 22 North, Range 1 East, and North ½ of Sections 33, 34, 35, and 36 Township 22 North, Range 1 East, and West ½ of Section 30, Township 22 North, Range 2 East in Cascade County.

(see location map).

PROPERTY OWNERSHIP: Federal State Private

TYPE AND PURPOSE OF ACTION: E.S. Stone and Structure, Inc. (E.S. Stone) currently quarries and collects building stone on 13 sites under Operating Permit 00163 in Golden Valley, Wheatland, and Cascade counties.

Operating Plan: E.S. Stone filed an application on July 14, 2014 for an amendment to Operating Permit 00163 from the Montana Department of Environmental Quality (DEQ), Environmental Management Bureau in Helena, MT. E.S. Stone has lease agreements with the landowners. Rock would be removed for the purpose of landscaping and masonry. The amendment area would consist of a total of about 5,920 additional acres on private land of which about 120 acres would be disturbed at any one time (100 acres at site 17 and 20 acres at site 18). The existing permit allows for 1,630 acres of disturbance over the life of mine.

E.S. Stone quarries landscaping and masonry rock found along outcrops, hilltops, and other areas. Rock is quarried from the surface and near surface with an excavator. Soil and overburden are stripped from the quarry and stockpiled for use in reclamation. Larger rock slabs are removed using tracked excavators or backhoes. Smaller rocks are picked up with a backhoe or by hand. The excavated stone is sorted and either placed on pallets for shipment to market, taken to a sawing shop, or processed on site into block and brick sized stone.

Reclamation Plan: As each quarry or portion of a quarry is closed, the waste stone is backfilled into the pits or pushed into low piles if the quarrying does not create pits and depressions. Previously saved soil is spread over the recontoured ground and the areas are then seeded with a native grass seed mix on areas of native range, or returned to agricultural production on areas that were previously farmed. Temporary sheds housing rock splitters would be removed at closure of operations. Soil in the staging area would be scarified before seeding.

The proposed amendment has been reviewed for compliance under a Supplemental Programmatic Environmental Assessment (SPEA) for a General Quarry Operating Permit published by the DEQ in February 2004. The site meets all the requirements under the SPEA except that the disturbance cannot be kept below five acres disturbed and unreclaimed at any one time. E.S. Stone would have a pallet and splitting yard.

E.S. Stone has 2,814 acres of permit area on 13 existing sites currently approved under Operating Permit 00163, of which a total of 600 acres can be disturbed at any one time. A total of 1,630 acres could be disturbed over

the life of mining. This permit amendment would add 5,920 acres to the permit area, for a total of 8,734 acres. New site 17 would add 160 acres of which 130 acres are proposed to be disturbed over the life of the mine and site 18 would add 5,760 acres of which 200 acres are proposed to be disturbed over the life of mine.

| Operating Permit 00163 | Current Conditions | Amendment 005 | Total |
|---|--------------------|---------------|-------------|
| Permit Area | 2,814 acres | 5,920 acres | 8,734 acres |
| Permitted Disturbance | 1,630 acres | 330 acres | 1,960 acres |
| Maximum Acres Disturbed at Any One time | 600 acres | 120 acres | 720 acres |
| Bonded Acres* | 351 acres | 120 acres | 471 acres |

*Three of the 16 permitted sites have been reclaimed and have had full bond released.

N = Not present or No Impact will occur.

Y = Impacts may occur (explain under Potential Impacts).

N/A = Not Applicable

| IMPACTS ON THE PHYSICAL ENVIRONMENT | |
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| RESOURCE | [Y/N] POTENTIAL IMPACT 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] Site 17 consists of grassland with sandstone of the upper Cretaceous Judith River Formation either outcropping or lying near the surface. The Judith River rock splits readily along sedimentary layers and is suitable for use as paving stones, stair steps, and building stones. It is to be mined by trenching and lifting out the rock.</p> <p>Site 18 is underlain mostly by upper Cretaceous rocks. This site features scattered sandstone boulders from the Bootlegger Member of the Blackleaf Formation. These boulders lie on the surface and are encrusted with lichens. They may be picked without excavation or with minimal disturbance and are suitable for landscaping use as ornamental “moss rocks.”</p> <p>The soils that will be impacted at site 17 are predominantly Cabbart loam (about 85%), followed by Rentsac-rock outcrop complex (about 8%), and Korchea-Fairway loam (about 6%).</p> <p>The Cabbart loam is found on slopes ranging from 2 to 15%. The depth to bedrock is 10 to 20 inches. The Cabbart loam soil is well drained, and the depth to groundwater is more than 80 inches.</p> <p>The Rentsac-Rock outcrop complex is found on slopes ranging from 15 to 45%. The depth to bedrock is 10 to 20 inches. The Rentsac-Rock soil is well drained, and depth to groundwater is more than 80 inches.</p> <p>The Korchea-Fairway loam is found on slopes ranging from 0 to 4%. The depth to bedrock is more than 80 inches. The Korchea-Fairway loam is well drained, and the depth to groundwater is more than 80</p> |

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inches.

The soils that exist at site 18 are predominately Yadim-Rentsac-Cabbart complex (about 31%), Abor-Yadim clays (about 15%), Tanna clay loam (about 13%), and Emem very stoney loam (about 10%).

The Yadim-Rentsac-Cabbart complex is found on slopes ranging from 15 to 50%. The depth to bedrock is 10 to 20 inches. The soil type is well drained, and the depth to groundwater is greater than 80 inches.

The Abor-Yadim clays is found on slopes ranging from 8 to 15%. The depth to bedrock is 20 to 40 inches. The soil is well drained, and the depth to groundwater is greater than 80 inches.

The Tanna clay loam is found on slopes ranging from 0 to 2%. The depth to bedrock is 20 to 40 inches. The soil type is well drained, and the depth to groundwater is greater than 80 inches.

The Emem very stoney loam is found on slopes ranging from 0 to 15%. The depth to bedrock is 10 to 20 inches. The soil is well drained, and the depth to groundwater is greater than 80 inches.

Site 17: Salvage of soil material above bedrock would ensure adequate soil cover over backfilled pits. Approximately 16 inches of soil would be salvaged and then spread over disturbed areas, except for pallet sites. Those sites would be scarified before seeding.

Surface and near surface rock would be quarried with an excavator, then transported to the pallet yard with a skid steer loader.

Site 18: Rock would be removed from the surface by hand, or with a skid steer loader, or small excavator. The rock would be loaded onto a truck and taken to the process area.

Concurrent reclamation would limit the amount of soil susceptible to erosion from wind and water. During periods of extreme drought reclamation seedlings may fail with some resulting loss of soil. Failed seedings would be reseeded until vegetation is successfully established. No permanent new truck roads would be constructed. Traffic volume and truck weight would not increase as a result of approval of the amendment.

IMPACTS ON THE PHYSICAL ENVIRONMENT

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| | <p>Removal of rocks from the surface and shallow pits is an unavoidable impact of rock product operations.</p> |
| <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?</p> | <p>[N] The nearest source of surface water is the Musselshell River which is approximately two miles away from site 17. The nearest surface water to site 18 is an ephemeral tributary to Muddy Creek that runs through the proposed amendment area during spring runoff. The amendment will stipulate that E.S. Stone cannot operate within 100 feet of Muddy Creek.</p> <p>According to the Montana Bureau of Mines and Geology (Ground Water Information Center database), no wells are located in Section 3 in which site 17 is located. The nearest wells are located in Section 2, 34, and 35. Those wells range in depth from 130 to 350 feet and are used for domestic uses and stockwater.</p> <p>There are six wells located within site 18. There is one well in T22N, R1E, Section 25 that has a depth of 1,212 feet that is used for stockwater, and three wells in T22N, R1E, Section 27 that range in depth from 1,100 to 1,176 feet that are domestic wells. There are two wells in T22N, R2E, Section 30 that range in depth from 21 to 28 feet that are used for monitoring purposes.</p> <p>Within a mile of the proposed permit boundary are numerous wells that range in depth from 10 to 1,212 feet.</p> <p>E.S. Stone has committed to retrieve and properly dispose of any spilled fuel or contaminated materials.</p> |
| <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] There would be dust produced by the operation due to travel on the gravel roads commonly found in the area. Landowners can require dust control as needed on their leases to the company. Concurrent reclamation would limit the potential for blowing dust from the operating area. The rock fragments left in the soils would also limit blowing dust.</p> |
| <p>4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetation communities be significantly impacted? Are any rare plants or cover types present?</p> | <p>[Y] Quarrying would occur on landscapes that have a thin soil cover. The sites are dominated by native grasses, providing approximately 50 percent ground cover. Species composition varies over the proposed amendment area. However, a generalized species composition table for both sites would be:</p> <p>Bluebunch wheatgrass 30 to 50% Idaho fescue 20 to 30% Needle and thread 20 to 30% Western and thickspike wheatgrass 10 to 20%</p> |

IMPACTS ON THE PHYSICAL ENVIRONMENT

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| | <p>Prairie Junegrass, blue grama, threadleaf sedge 10 to 20% Forbs 10 to 20%</p> <p>The disturbed sites would be broadcast seeded with: 40% Critana thickspike wheatgrass at 11 lbs./acre 20% Secar bluebunch wheatgrass at 6 lbs./acre 20% Lodorn green needlegrass at 5 lbs./acre 10% Sandberg bluegrass at 0.5 lbs./acre 10% Annual ryegrass at 2 lbs./acre For a total of 24.5 lbs./acre.</p> <p>Leafy spurge is present in the area. The operator would use weed free seed and control noxious weeds per Wheatland and Cascade County Weed Management Plan.</p> <p>The plant communities on these shallow to very shallow range sites are dominated by native grasses. The plant communities that would be impacted are common in the sedimentary plains of Montana. The site is on native range used for grazing and crops.</p> <p>A search of the Montana Natural Heritage Program (MNHP) database at the Montana State Library in Helena, MT found that there are no known threatened and endangered (T&E) plant species present.</p> <p>MNHP indicated that there is a species of concern in site 17. Small dropseed is an annual plant and would reproduce from seed if soil is replaced after reclamation is completed. It would naturally be found on disturbed sites.</p> <p>MNHP indicated that there are no species of concern in site 18.</p> <p>Disturbance on the site would lead to more noxious weed invasion in the area, especially from the existing populations of leafy spurge. Weed control efforts would limit these impacts. The disturbed land would be reclaimed to livestock grazing and dryland farming. Loss of native species on disturbed rangeland would be an unavoidable impact of disturbance.</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>[Y] The rock product area is commonly used by mule deer and antelope. They would be displaced around the human activity until reclamation is completed. There is no winter range for ungulate species or aquatic habitat in the permit area.</p> |
| <p>6. UNIQUE, ENDANGERED,</p> | |

IMPACTS ON THE PHYSICAL ENVIRONMENT

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| <p>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>[Y] The MNHP indicated that a number of animal species of concern have either been sighted in the area or could be expected to be found in the permit boundary.</p> <p>Site 17: These species include: the Bald eagle, Ferruginous hawk, Great blue heron, Northern redbelly dace, Veery, and the Greater short-horned lizard.</p> <p>Bald eagles are seasonal migrants through the area, but do not remain in the uplands. They are more closely associated with the Musselshell River valley. Eagles may use the outcrops as perching sites. A Bald eagle was sighted in the area in 2005. A Ferruginous hawk was sighted in the area in 2000. The Ferruginous hawk is associated with the Musselshell River and not the uplands where rock collecting activities would occur. The Great blue heron was last observed in 2012. The habitat type is riparian forest. The Northern redbelly dace has not been observed. The habitat type is stream reaches and standing water bodies. The Veery has a general habitat of riparian forest and was observed in the area in 1994. A Greater short-horned lizard was last observed in 1933. The habitat type is sandy/gravelly soils.</p> <p>MNHP indicated that there are no species of concern in site 18.</p> |
| <p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p> | <p>[N] A records search by the State Historic Preservation Office did not return any historical or archaeological sites. The proposed site has the potential to impact cultural resources. E.S. Stone has committed to protect any resources found.</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] The two proposed rock collecting sites are in a rural area. Activity would be visible from nearby county roads during operations, but the disturbance created would not be readily apparent in the absence of construction equipment. Soil would be replaced in site 17 after the rock has been removed, and then scarified and reseeded. Site 18 would not have soil removed as rock would be lifted from the surface. The reclaimed rock collecting sites would appear similar to the original rangeland in the area.</p> <p>No new roads would need to be constructed. Approximately eight semi-truck loads per week would leave the processing plant located in Harlowton.</p> <p>The hours of operation would be four days per week, 10 hours per day, all year long.</p> |
| <p>9. DEMANDS ON ENVIRONMENTAL</p> | <p>[N] The project sites are isolated, and would require a minimum of energy resources.</p> |

| IMPACTS ON THE PHYSICAL ENVIRONMENT | |
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| 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? | |
| 10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project? | [N] The surrounding land uses are livestock grazing and dryland farming. |

| IMPACTS ON THE HUMAN POPULATION | |
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| 11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area? | [N] |
| 12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities? | [N] These operations are a source of income for area ranchers. |
| 13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number. | [N] Stone producing operations in Wheatland County are major employers, providing work for a segment of the population that is otherwise unemployed, or underemployed. While work would be created in Cascade County, no new employees would be necessary. |
| 14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue? | [N] This project would create 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] There is no anticipated need for increased government services as a result of this project. |
| 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 | |
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| 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] There are no wilderness or major recreational areas nearby, or accessed through this site. |
| 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 work force would be local or drawn from neighboring counties. Royalty payments made to landowners of rock picking sites help to maintain the sometimes tenuous existence of family owned farms and ranches recovering from the regional drought. |
| 20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area? | [N] |
| 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. | [Y] |
| 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] In 1995, the Montana Legislature amended the Montana Environmental Policy Act (MEPA) to require state agencies to evaluate in their environmental documents any regulatory restrictions proposed to be imposed on the use of private property. Section 75-1-201(1)(b)(iv)(D), MCA. Alternatives and mitigation measures designed to make the project meet minimum environmental standards with implementation methods specifically required by federal or state laws and regulations are excluded from evaluation under the implementing guidelines for Section 75-1-201(1)(b)(iv)(D), MCA. |
| 23. PRIVATE PROPERTY | [N/A] |

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

25. Alternatives Considered:
No Action: Deny the request for the amendment to the operating permit. No issues were identified which would require denying the amendment.
Approval: Approve the amendment as proposed.
Approval with Modification: E.S. Stone will not be allowed to disturb land within 100 feet of Muddy Creek.
26. Public Involvement: A legal notice was published in the *Harlowton Times/Clarion* and the *Great Falls Tribune*, and a press release was issued on receipt of the application for an amendment to the operating permit. A legal notice and press release will be published with release of the Draft EA.
27. Other Governmental Agencies with Jurisdiction: None
28. Magnitude and Significance of Potential Impacts: There would be no significant impacts associated with this proposal.
29. Building stone quarries and rock collecting sites are increasing throughout Montana. DEQ has prepared a SPEA on these operations. The operations that qualify must meet the following provisions:
- Any individual small quarry may maintain a working disturbance of up to five acres. Total disturbance during the life of an individual operation could exceed five acres, but concurrent reclamation would be required to keep the disturbance at any one time to five acres or less. Access roads would not be included in the disturbed total, but the operator would submit a reclamation bond for roads that do not have an approved use after quarrying. Roads approved for the land use after quarrying and access or haulage roads which are required by a local, state, or federal agency having jurisdiction over that road would not have to be bonded;
 - There would be no impact to any wetland, surface or ground water;
 - There would be no constructed impoundments or reservoirs used in the operation;
 - There would be no potential to produce any acid or other pollutive drainage from the quarry;
 - There would be no impact to threatened and endangered species; and
 - There would be no impact to significant historic or archaeological features.

The site proposed by E.S. Stone meets all of these requirements except the operator cannot keep the disturbance to less than five acres disturbed and unreclaimed at any one time. Even though the site may exceed five acres disturbed and unreclaimed at any one time, there would be no other impacts other than the size of the disturbance area over those analyzed in the SPEA. This Checklist EA tiers to the 2004 SPEA and the 2010 EA for amendment 004. Reclamation would limit impacts. DEQ would bond E.S. Stone to reclaim the acres disturbed by quarrying.

Many acres could be potentially disturbed by quarry operations throughout Montana as a result of the demand for building stone. The cumulative impacts from these operations can lead to more soil disturbance requiring reclamation, more impacts to native plant communities, and increased potential for noxious weed invasion and spread, as well as economic benefits to the local economies from quarry operations.

30. Recommendation for Further Environmental Analysis:

EIS More Detailed EA No Further Analysis

The DEQ has selected the Approval with Modification as the preferred alternative.

DEQ has considered the criteria set forth in ARM 17.4.608 and has determined that an EA is an appropriate level of analysis. As reflected in this Expanded Checklist EA, none of the adverse effects of the impacts resulting from the proposed tests are significant. Impacts that do result from the proposed action of removing rock from the surface and near surface are discussed above. Other than the temporary disturbance of soil and vegetation there would be no impacts. The minor ground disturbances resulting from the removal of decorative and masonry rock would be recontoured and revegetated.

31. References:

GWIC, <http://mbmggwic.mtech.edu/>,

NRCS, <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed 7/17/2014.

32. EA Checklist Prepared By:

Herb Rolfes, DEQ Operating Permits Section Supervisor

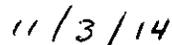
Patrick Plantenberg, DEQ Reclamation Specialist

33. This EA was reviewed by:

Warren McCullough, DEQ, Environmental Management Bureau, Chief

Approved By:





Signature

Date

Warren D. McCullough, Chief

Environmental Management Bureau, DEQ

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