

CHECKLIST ENVIRONMENTAL ASSESSMENT

COMPANY NAME: URS Energy and Construction, Inc. (URS), 91 South Main Street, Soda Springs, ID 83276

PROJECT: Quarry operation with rock crushing for railroad ballast

PERMIT OR LICENSE: Operating Permit #00148 (Amendment 004)

LOCATION: The site is located in Jefferson County approximately 1 mile north of the former Pipestone RV campground, in portions of Sections 17, 20, and 21, Township 2 North, Range 5 West.

COUNTY: Jefferson County

PROPERTY OWNERSHIP: Federal State Private

TYPE AND PURPOSE OF ACTION: URS Energy and Construction, Inc. (URS) is proposing to amend the quarry and rock crushing operation covered under Operating Permit #00148. The crushed rock is used for railroad ballast. The quarry is proposed to be excavated to a maximum depth of about 325 feet, leaving a reduced maximum highwall of about 280 feet. The operator uses dozers, front end loaders, and standard rock crushing equipment. An amendment to the approved operating plan is requested in order to:

- 1) The permit area would be increased from 94.7 acres to 98.5 acres (a 3.8 acres increase). The increase is an extension of the boundary in the upstream direction of the easterly natural drainage channel. Currently, the easterly natural drainage basin is to be channeled west along the north edge of the Out-of-Pit Fines Storage Area, where it intersects the westerly natural drainage channel; then flows south into the settling and recycle pond. This is proposed to be changed by raising the elevation of the easterly natural drainage in the proposed expanded permit boundary area so storm water from the basin will flow onto and around the east side of the Out-of-Pit Fines Storage Area into the final open pit.
- 2) The disturbance area would be increased from 62.5 acres to 64.6 acres (a 2.1 acre increase). The increase is due to the Out-of-Pit Fines Storage Area and the upstream extension of the fill in the easterly natural drainage channel to accommodate final reclamation drainage. The overall acreage of disturbance would be reduced in the roads, ponds, and topsoil areas when taking into account disturbed areas that have been successfully reclaimed.
- 3) Approximately 8,500,000 tons of rock are expected to be mined over the next 13 years resulting in the production of 5,100,000 tons of railroad ballast. URS proposes the mining of an additional 3,100,000 total tons of rock, producing an additional 1,240,000 tons of railroad ballast as compared to Amendment 003. The mine life would be extended by approximately four years through year 2025.

URS proposes to mine Phase 2 to the 790 foot elevation which is 115 feet deeper than the current permitted elevation of 905 feet; and mine Phase 3 to the 840 foot elevation which is 65 feet deeper than the current permitted elevation of 905 feet. Surface width and length of the pit would not change as mining would be conducted within the current permitted pit boundary. Elevations used are not actual mean sea level elevations, but rather a vertical control system based upon a local datum.

- 4) Amendment 003 allows for the easterly natural drainage basin to be channeled west along the north edge of the Out-of-Pit Fines Storage Area, where it intersects the westerly natural drainage channel; then flows south into the settling and recycle pond. Amendment 004 proposes to change that drainage plan by raising the elevation of the easterly natural drainage in the proposed expanded permit boundary area so storm water from the basin will flow onto and around the east side of the Out-of-Pit Fines Storage Area into the final open pit.

Under this drainage plan the westerly natural drainage channel would continue to be channeled around the west boundary of the Out-of-Pit Fines Storage Area into the settling and recycle pond. Any waters within the area of disturbance would be directed to the final open pit or the settling and recycle pond.

- 5) As proposed in Amendment 004 the bulk of the final grading effort is with the fines storage areas. Unlike Amendment 003, the proposed fines storage area in Amendment 004 is distinctly segregated into two areas; the Out-of-Pit Fines Storage Area and the In-Pit Fines Storage Area. Most of the fines generated over the remaining life of this resource would be back-filled into the existing open pit concurrent with quarry operations to constitute the In-Pit Fines Storage Area. Back-filling would commence when mining has been completed in Phase 2. Upon commencement of the back-fill, final grading and reclamation of the Out-of-Pit Fines Storage Area would commence.

Much of Phase 3 would not be backfilled leaving a final pit with exposed highwall. The pit floor along with the north haul road would receive 12 inches of fines. Highwall safety benches would be soiled and revegetated concurrent with mining. At opportune locations on these highwall benches, small excavations and rock piles would be created to provide habitat for wildlife.

Final slopes of the fines storage area would be regraded to 3:1 (horizontal:vertical) slope or flatter. Flat portions of any of the disturbed area would be graded at 1% minimum slope for drainage into the final pit or to the settling and recycle pond.

DEQ must prepare an Environmental Assessment (EA) as the quarry and associated facilities would be modified in the proposed amendment.

N = Not present or No Impact would occur.

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

N/A = Not Applicable

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACT 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?	<p>[Y] The proposed quarry site and surrounding area lie on the east margin of the Boulder Batholith. The oldest rocks in the area are Elkhorn Mountain Volcanics of Late Cretaceous age, which consist of mainly tuff agglomerate, lava flows, and volcanic breccia, overlain by several sheets of welded tuff. These volcanic rocks are intruded by a thick, widespread sheet of diorite porphyry and by several dikes and small irregular bodies of porphyritic basalt. Both of these main rock units are intruded to the west by the rocks of the Boulder batholith, mainly Butte Quartz Monzonite. Unconformably overlying these rocks are light-colored, poorly consolidated tuffaceous lake and stream deposits of Oligocene age, and younger alluvium stream terrace and colluvium deposits.</p> <p>The proposed quarry is in dark gray, dense, siliceous basalt and diorite porphyry. The staging area required for stockpiling and crushing operations was constructed from basalt and diorite porphyry</p>

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bedrock and from overlying colluvial soils derived from these bedrock types.

There are no known unique geologic features, natural landslides or major fault systems in the permit area and adjacent area (one-mile radius). The area surrounding the project is characterized as having a relatively low historic seismic activity.

The USDA Natural Resources Conservation Service provided descriptions and maps delineating soil types and thicknesses for the Pipestone Quarry area. The surface of the ridge to be mined is predominately a mixture of rock outcrops consisting of dense, hard, fractured bedrock and bedrock covered with four to twelve inches (average six inches) of stony soil between the rocks. Recovery of useable topsoil from the rocky ridge will be meticulous and will produce minimal yield. Thick deposits of useable topsoil are available in the drainage bottomland, which will provide the majority of salvaged soil to be used in reclaiming the entire quarry site.

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] The proposed quarry is located in an unnamed watershed that is an ephemeral tributary to Pipestone Creek. The drainage area upstream of the railroad embankment is approximately 167 acres of which 54 acres drains south within the west side of the site to the quarry settling/storage pond, about 111 acres drains south within the east side of the site to the pit floor and there is a 2-acre buffer around the pit that drains onto natural ground. Of the total area draining to the pond, about 21.5 acres drains to the west channel. Of the total area draining to the pit floor, about 91 acres drains to the east channel. The railroad and Interstate 90 cross this watershed drainage downstream from the quarry site. Approximately 2 acres of parking lot, access road and parts storage located below the railroad tracks drain onto natural ground.

A hydrologic analysis was performed to determine the 100-year stormwater runoff for the watershed sub-basins. The results indicate that the peak 100-year flow rate to the west channel is approximately 39 cubic feet per second (cfs) with a total peak flow rate of approximately 105 cfs to the pond. The 100-year peak flow rate to the east channel is approximately 138 cfs with a total peak flow rate of approximately 162 cfs to the pit floor.

There is an existing 36-inch steel culvert under the railroad embankment. The culvert shows no evidence of problems in handling past storm events. In 1992 a riser pipe, trash rack and emergency release gate were installed on the upstream end of the culvert to form a settling/storage pond behind the railroad embankment. The pond area contains a sediment clean-out box and a lined settling and recycling pond. Since the inception of the quarry and the installation of the riser pipe, the water in the settling pond

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	<p>has never overtopped the railroad embankment.</p> <p>The site access road crosses a small, unnamed, ephemeral drainage north of the State Highway maintenance staging area. There is an existing 18-inch culvert at the access road crossing. All necessary steps are taken to preclude unwarranted sedimentation and pollutants from entering the drainage channels from the quarry operations and access road.</p> <p>The site is dry with no springs and only ephemeral drainages. The final quarry highwall would have a maximum height of about 300 feet as measured from the regraded pit bottom. There would be no impact to ground water. Impacts to water from petroleum product spills, and herbicide use to control weeds, would be limited by the distance to water. A water supply well associated with the quarry is located within the proposed permit area and about 1,500 east of the pit. A monitoring well was drilled in April 2014 near what would be the deepest part of the pit, and about 50 feet deeper than the proposed bottom of the pit. The well is dry.</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] The air shed classification of the project is Class II. There were no monitoring data available prior to mining. However, since there are no major developments in or adjacent to the quarry site, it is assumed that pre-mine air quality was well below applicable standards. The Department of Environmental Quality, Air Quality Bureau, has issued air quality permits Nos. 2675 and 2751 for the crushing operation at the quarry.</p> <p>Air Quality will be monitored (and kept in compliance) by operations personnel trained in EPA method 9 opacity testing, whenever a dust or smoke plume is suspected of approaching opacity limits.</p> <p>There would be dust produced by these operations due to travel on unpaved roads, as well as from the crushing operation and stockpiles. A water truck would be used for dust control. Water would be obtained from an existing well.</p>
<p>4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?</p>	<p>[Y] The plant community type is grassland and the permit area and adjacent areas are used as non-irrigated rangeland and habitat for Coyote (<i>Canis latrans</i>), Pronghorn (<i>Antilocapra americana</i>), and mule Deer (<i>Odocoileus hemionus</i>). The present vegetation consists of bluebunch wheatgrass (<i>Agropyron spicatum</i>), blue grama (<i>Bouteloua gracilis</i>), rubber rabbitbrush (<i>Ericameria nauseosa</i>), broome snakeweed (<i>Gutierrezia sarothrae</i>), needle-and-thread grass (<i>Stipa comate</i>), and fringed sagewort (<i>Artemisia frigida</i>).</p> <p>The native plant communities that would be impacted are common in this arid environment. Disturbance of these native plant communities is an unavoidable impact of the quarrying activities.</p>

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	<p>Reclamation of the site and seeding of grass species suited to arid conditions would limit impacts but the native plant communities cannot be restored.</p> <p>A search of the Natural Resource Information System (NRIS) database returned with a finding that there are no known threatened and endangered or sensitive plant species growing in the permit and surrounding area.</p> <p>The proposed disturbance would lead to more noxious weed invasion in the area. This is an unavoidable impact of disturbance. Weed control efforts would limit these impacts. The proposed amendment would not change the original permitting conclusions.</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>[N] The plant community type is grassland and the permit area and adjacent areas are used as non-irrigated rangeland and habitat for Coyote (<i>Canis latrans</i>), Pronghorn (<i>Antilocapra americana</i>), and mule Deer (<i>Odocoileus hemionus</i>).</p> <p>A search of the Natural Resource Information System (NRIS) database returned with a finding that there are four animal species of concern. The species consist of Clark’s nutcracker, sage thrasher, hoary bat and wolverine.</p> <p>The existing mine should not have any impact on these species as only 2.1 acres of additional disturbance is planned, and these species exist over a wide range.</p> <p>Some of the raptor species found within a ten mile radius of the mine are: bald eagle, northern harrier, sharp-shinned hawk, Cooper’s Hawk, Swainson’s hawk, red-tailed hawk, rough-legged hawk, golden eagle, American kestrel, gyrfalcon and the prairie falcon.</p>
<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>	<p>[N] A search of the NRIS database found that there are no known threatened and endangered animal species in the area. The proposed amendment would not change the original permitting conclusions.</p>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p>[Y] One cultural resource site was identified within the quarry expansion area. Mitigation of the adverse effects of the mine expansion has been accomplished through a memorandum of Agreement between the BLM, the State Historic Preservation Office, and URS, which provided financial remedy to the affected native</p>

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	<p>tribes.</p> <p>The operator would provide protection for any new archaeological and historical sites if they are discovered.</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 proposed quarry is in a remote, rural area. Mining activity would be visible from intermittent stretches of Interstate 90 and some areas south of the highway would have partial views of the quarry area. The disturbance would not be readily apparent in the absence of construction equipment. A ridge currently provides a buffer zone between Interstate Highway 90 and the quarry which will mitigate visual and noise impacts, although the top of the ridge would be removed. Portions of the highwall would be visible during operations and after final reclamation.</p> <p>Reclamation of the site would reduce visual impacts. Soil would be replaced after the stockpiles and other facilities have been removed and then the areas would be reseeded. Soil would not be replaced on the quarry highwall due to its steepness. The reclaimed quarry would not have the appearance of the original hill. This is an unavoidable impact of quarrying activities.</p> <p>Noise levels have had minimal impact to date. Interstate 90 is located between the quarry site and Pipestone Creek, a small residential area. There are no residents within three quarters of a mile of the quarry.</p> <p>Blasting takes place one to two times per month and is audible from the Pipestone area. This is expected to continue.</p>
<p>9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area?</p>	<p>[N] This project would be isolated and require a minimum of energy resources. The proposed amendment would not change the original conclusions.</p>
<p>10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?</p>	<p>[N] The surrounding land use has historically been livestock grazing.</p>

IMPACTS ON THE HUMAN POPULATION	
<p>11. HUMAN HEALTH AND SAFETY: Will this project add to</p>	<p>[N] This is an existing quarry and no additional impacts to human</p>

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health and safety risks in the area?	health and safety are expected with approval of this amendment.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[Y] The quarry will provide a source of crushed rock for railroad ballast and other uses that might arise in the area.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[Y] The project would maintain current jobs associated with the quarry operation. The work force is between ten and twenty employees during the crushing, and shipping season, which goes from March through November. Employees are hired locally if possible. No new employees are expected to be hired with approval of this amendment. The proposed amendment would not change the original permitting conclusions.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[Y] This project would maintain tax revenue. The proposed amendment would not change the original permitting conclusions.
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 that would result from this project. The proposed amendment would not change the original permitting conclusions.
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] There are no wilderness areas or major recreational areas on private land in this area. The major recreational uses in the region are hunting and fishing. The proposed amendment would not change the original permitting conclusions.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N] The proposed amendment would not change the original permitting conclusions.

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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. The proposed amendment would not change the original permitting conclusions.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N] The proposed amendment would not change the original permitting conclusions.
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] The proposed amendment would not change the original permitting conclusions.
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 amendment would not change the original permitting conclusions.
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.	[N/A] The proposed amendment would not change the original permitting conclusions.
24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N] The proposed amendment would not change the original permitting conclusions.

25. Alternatives Considered:

