



ERP ROAD SURFACE MANAGEMENT PLAN

REGULATORY COMPLIANCE

ERP is committed to adhering to all King County Department of Transportation, King County Department of Permitting and Environmental Review, Washington State Department of Transportation, and any Mining Safety and Health Administration (MSHA) regulatory standards. The best management practices and design plans outlined in this document satisfy all requirements set forth by any regulatory agencies that administer policy and or have direct oversight governing site operations.

KING COUNTY CODE AND PERMIT CONDITIONS

Clearing and Grading Conditions

CG-42: Existing access road paving, from the Preston-Fall City Road to at least the quarry office and scale, in conjunction with other measures as needed, shall be maintained to the satisfaction of KCDOT and DPER, to prevent rocks, dirt, mud, and any raw or processed material from spilling from or being tracked by trucks onto public roadways in accordance with KCC 21A.22.070.D and to minimize additional noise.

CG-43: No rock, debris or dirt attributable to trucks leaving the site will be tracked or spilled onto the Preston-Fall City Road.

Relevant King County Code

KCC 21A.22.070.D: The applicant shall prevent rocks, dirt, mud and any raw or processed material from spilling from or being tracked by trucks onto public roadways and shall be responsible for cleaning debris or repairing damage to roadways caused by the operation

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DEBRIS ACCUMULATION PREVENTION CONTROLS AND ACTION LEVELS

PREVENTION CONTROLS

ERP utilizes several engineering and administrative controls to prevent debris from being conveyed outside of the quarry. These controls will be closely monitored and maintained by ERP Management and onsite personnel, and are continuously evaluated for effectiveness.

ERP debris accumulation prevention controls include:

- Haul traffic being limited to 10mph
- Visual road surface condition monitoring by ERP staff
- Weather forecast monitoring by ERP staff
- Scale House, loading area, and active mining area capped with 1 ¼ clear (free of aggregate smaller than ½") or equivalent material
- Carmichael Road surface paved from Preston Fall City Road to scale house
- 4"x 8" quarry spall rock sections for scrubbing truck tires
- Scrubbing of scale to remove buildup of material
- Daily sweeping of paved surfaces with Skidsteer with Broom Attachment
- Drainage revisions to control runoff from the paved portion of Carmichael Road leading up to the Bridge when exiting the quarry
- Installation of straw waddles under bridge rub rails
- Use of Contracted Vacuum Truck Service

LEVEL 1: AGGREGATE ROAD SURFACE DEBRIS ACCUMULATION IN PIT

Daily maintenance of roadway areas will prevent over-accumulation of debris on roadway surfaces under normal operating conditions. In addition to maintaining road surfaces, drainage systems are kept fully functional to prevent accumulation of standing water which can contribute to muddier conditions.

- Maintenance of quarry drainage system to prevent/reduce standing water
- Cleaning of excess material from roadway with flat-edge loader bucket
- Daily maintenance of roadways, including supplemental clean aggregate surface application

LEVEL 2: AGGREGATE ROAD SURFACE DEBRIS ACCUMULATION NEAR SCALEHOUSE

During the wet season or periods of excessive precipitation, roadway surfaces may be more difficult to maintain. Intermittent sections of quarry spalls have been installed to create rock sections that “scrub” haul traffic tires to prevent trucks from carrying debris onto the paved roadway exiting the quarry. Quarry spalls ranging from four to eight inches are most effective for this process. When exiting the quarry, permanent spall pads are located before the quarry scale and after the scale all the way up to the paved portion of Carmichael Road before the Bridge. Spall pads are also placed intermittently throughout the haul road during periods of high precipitation. These sections of quarry spall are maintained by removing old spalls as needed and re-stocking freshly crushed spalls.

- 4”x 8” Quarry Spall Pads installed before scale
- 4”x 8” Quarry Spall Pads Installed intermittently on haul roads within the quarry
- Regular removal of old spalls and re-stocking of fresh spalls

LEVEL 3: TRUCK SCALE SURFACE DEBRIS ACCUMULATION

In the event that debris accumulation begins to show on the quarry scale, quarry personnel will utilize the Skidsteer with Broom Attachment, to remove any accumulation of debris present on the scale surface. This will prevent haul traffic from picking up material off of the scale and transmitting it onto the paved section of Carmichael Road or beyond. There is also a section of 4”x 8” quarry spalls that begins at the exiting side of the scale and extends until the beginning of the paved portion of Carmichael Road that further reduces any debris remaining on exiting truck tires.

- Skidsteer with Broom Attachment
- 4”x 8” Quarry Spalls installed between scale and pave portion of Carmichael Road

LEVEL 4: CARMICHAEL ROAD OR BRIDGE CROSSING DEBRIS ACCUMULATION

In the event that preventive measures are not fully effective in keeping debris from reaching the paved portions of Carmichael Road or the Bridge leading to the Preston Fall City Road, then additional measures will be utilized to ensure the surface of Carmichael road is maintained, while preventing against any potential sediment discharge to the Raging River. Several pieces of equipment and contracted services will be used in combination to ensure that any debris accumulation on the paved portions of Carmichael road or the Bridge is continuously monitored and corrected.

- Skidsteer with Broom Attachment (onsite)
- Contracted Vacuum Truck Sweeper Services
- Manual brushing off of truck tires on the scale

For the paved portions of Carmichael Road leading up to the bridge when exiting the quarry, the Skidsteer with Broom Attachment will be used to sweep debris away from the bridge towards the scale house. Contracted Vacuum Sweeper Trucks will be used to suck up any remaining debris and “clean” the paved surfaces to prevent any sediment from traveling toward the river. Proposed maintenance to drainage along the western approach to the Bridge will also prohibit any road debris or sediment from entering the Raging River.

On the Bridge itself, Contracted Vacuum Sweeper Trucks will be used to suck up debris that has been tracked onto the bridge and that could be tracked further toward the Preston Fall City Road. Straw waddling has been installed below the bridge rub rails to ensure that any water present on the bridge must pass through the waddling prior to entering the Raging River, which will further prohibit any potential sediment discharge.

On the section of paved road leading from the Bridge to Carmichael Road, the Skidsteer with Broom Attachment will be used to sweep the area free from any debris that could accumulate from entering or exiting traffic. Contracted Vacuum Sweeper Trucks will be used to suck up any remaining debris and “clean” the paved surface to prevent any sediment from being tracked onto Preston Fall City Road.

ADDITIONAL POTENTIAL CONTROLS

In addition to debris accumulation prevention controls already in-place, several potential options have been identified in the event that currently provided engineering and administrative controls are inadequate.

- Further addition of quarry spalled sections around in pit haul roads for tire scrubbing
- Installation of Vibration Grids Adjacent to scale
- Installation of Rumble Strips on quarry haul road
- Additional Paving