

Endako Mine Tailings Dust Suppression 2016

History:

2nd half of 2015 - In July Endako went into full care and maintenance. Throughout the summer water was pumped out of #1 and #3 tailings pond. This was done to help ensure that at least 500' of beach would be maintained during the spring freshet.

During the summer, winds swept the tailings ponds creating dust clouds visible from Fraser Lake and surrounding area. The site started looking at different options for mitigating the dust issue. Seeding, sprinkling and types of soil stabilization are all options being looked at.

October,

A hydroseeding program was undertaken using a mix of fall rye, fertilizer and mulch. 24+ hectares on the outer slope of #1 tailing pond were hydroseeded.



Irrigation Company was brought on site for recommendations and quotes on sprinkler systems.

2016 – Snow pack was below normal for the year and the tailings ponds gathered little water accumulation. Drier than normal April and May contributed to increased evaporation of water. Airborne dust was still an issue due to high winds. Continue to work with the different government agencies, other mines and soil stabilization companies.

March and April,

Snow fencing and trenching was done for approx. 1.5 kilometers along the east side of #1 pond.



May,

12 hectares of Hydro seeding was done on the north benches of #1 pond.



Previous Hydroseed growth. Yellow is new hydroseeding.

Old hay was spread out on the west end of #3 pond.

First test was done using Magnafloc #336 as a soil stabilizer. Preliminary results were positive.

Test was done using IPAC 6832 as a soil stabilizer. Results showed this material to be ineffective.



Soil stabilizer being applied on #3 tailing pond.

June,

Collectors for dust fall monitoring were put up to collect data on potential dust leaving the mine site.



Chemical supplier “Quadra Chemicals” were on site with “Terrasol Environment”

35 tests were done using different strengths of Magnafloc #336, Guar Gum and Tackifier.

Once dried a turbo fan was placed onto each area to see what erosion would take place. Inspection of the thickness of the crust was also noted.



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Untreated area control test:

Immediately extreme erosion was noted.

Dust blew as far away as 20 feet.

Magnafloc #336 at 0.35% has proven to be the most effective.

Broadcast seeder ordered for the side-by-side.

July,

An area of 7 acres on the North West corner of #3 pond is being covered with Magnafloc #336 at a 0.35% strength.

Couple of tests broadcasting fall rye seeds were done.



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Magnafloc #336 at 0.35% control test:

1/8" crust. No erosion noted.