

Appendix L

Chronology of Dust Control Improvements to the DMTS Road and Port Operations

Chronology of Dust Control Improvements to the DMTS Road and Port Operation

The following is a summary of improvements that have been made to the DMTS road and port operations for dust control.

Summer 1990

- Added vibrators to concentrate trailers to reduce carry-out from the truck unloading building (TUB)
- Tested the application of calcium chloride to road gravel for dust control.

Spring 1991

- Added a drop-tube to the P11 shiploader discharge to minimize fugitive dust while loading lightering barges.

Summer 1991

- Installed additional dust collection in gallery and transfer points
- Enclosed all transfer points
- Installed a floor on the first level of the surge bin
- Improved the truck unloading station ventilation
- Installed equipment wash bay building to the concentrate storage building (CSB)
- Installed new doors for existing CSB
- Installed improved doors on the TUB.

Fall 1991

- Began application of calcium chloride for dust control on port road.

Spring 1992

- Began application of calcium chloride for dust control on port site yards.

Summer 1992

- Outfitted all port system conveyors, except for shiploader, with canvas tent style enclosures (Conveyors P7, P8, and P10)
- Installed module over P10 conveyor drive unit
- Installed plywood covers over tail ends of P8 and P10 conveyors.

Fall 1992–June 1993

- Installed entirely new P11 shiploader conveyor with improved enclosure.

June–July 1994

- Installed additional siding to enclose P9-A and P9-B (surge bin) conveyors.

August–September 1994

- Further enclosed conveying system surge bin.

Winter 1996–1997

- Changed trailer wing deflectors to stainless steel for reduced adhesion and carry-out from the TUB.

1996–1997

- Conducted port site expansion and upgrade (production rate increase)
- Upgraded most of the conveyor system (new conveyors enclosed in steel tubes and additional baghouses at P22, P22-A, P23, P27, P28) and added second CSB
- Placed P7/P8 (Transfer Tower #4) transfer in enclosed steel building.

Winter 1998–1999

- Began using Chem-Loc[®] release agent in concentrate trailers to minimize residuals and carry-out following dumping (reduced need for air-lancing residual concentrate from trailers)
- Switched to improved reinforced covers on concentrate trailers
- Began using Bobcat loader to clean up TUB dumping platform between dump events to reduce potential concentrate track-out from TUB.

Spring 1999

- Added a spill deflector gate in the TUB and removed deflector wings from concentrate truck trailers to minimize carry-out from TUB.

Fall 1999

- Added concrete apron to south door of TUB.

Spring 2000

- Added man-door to TUB control room to allow personnel to enter/exit building without opening large equipment doors.

Spring–Summer 2001

- Enclosed P8 conveyor (CSB#1 to Surge Bin) in metal tube (completed prior to 2001 shipping season). The conveyor was previously enclosed with a canvas tent-style enclosure system.
- Replaced covers on P11 shiploader conveyor
- Upgraded to motorized conveyor belt scrapers from standard blade scrapers
- Installed and utilized a truck wash outside of the TUB exit for use during non-freezing conditions
- Began to utilize new self-dumping trailers with hydraulically operated hard covers and no side doors to eliminate potential for concentrate leakage.

August 2001

- Installed temporary stilling curtains over the TUB hopper to promote dust settling, until a permanent more complex arrangement was installed.

June–November 2001

- Initiated a change out of the concentrate haulage fleet during the summer of 2001 (Teck Cominco and NANA Lynden Logistics). Existing A-train 85-ton haulage units with side-opening doors were replaced by B-train 130-ton haulage units. Fleet change out completed in November 2001. The new self-dumping trailers include:
 - Hydraulically operated steel covers to minimize spills
 - No side doors to eliminate potential for concentrate leakage
 - More stability, thereby reducing risk of accidents.

Winter 2001–2002

- Updated standard operating procedures for concentrate handling
- TUB improvements:
 - Extended 26 ft to accommodate length of new trailers
 - Installed enhanced stilling curtains over the TUB hopper to promote dust settling
 - Installed temporary baghouse (14,500 cfm) at truck dump hopper
 - Eliminated air lancing of trucks.
- Port CSB improvements:
 - Equipped loader and dozers with exhaust particulate filters.

Spring 2002

- Equipped the four loading hoppers inside of the CSBs with passive stilling bin hoods and curtains to reduce dust generation inside the CSB during shiploading operations. Modifications completed prior to 2002 shipping season.

July 2002

- Conducted a test paving program utilizing a “Hi-Float” product on approximately 2.5 miles of the DMTS haul road from the fuel island to the New Heart Creek Bridge. Also placed Hi-Float at the access to the CSBs, TUB, and on limited operating areas.

Spring 2002

- Completed surge bin dust control modification prior to 2002 shipping season. Modifications include:
 - Re-routed baghouse ducting for better dust capture
 - Insulated ducting to reduce potential of dust “caking”
 - Installed improved baghouse controls

- Improved sealing on surge bin
- Improved sample door seals
- Installed belt skirting.

July–November 2002

- Installed new TUB “air wash” dust control system incorporating a 55,000 cfm baghouse that draws dust-laden air from the truck unloading hopper and concurrently uses positive airflow across the concentrate trailer to minimize the potential of dust adhering to the concentrate haul trucks during the unloading process.

June 2003

- Completed shiploader dust control modification, including:
 - Installed new P10/P11 transfer chute baghouse
 - Installed new P10/P11 transfer chute seals
 - Redesigned and upgraded the cover tail end, extension hood, conveyor belt cover and enclosure, chute and ducting of the P11 conveyor
 - Upgraded skirting, scrapers and inspection doors on P11 conveyor
 - Enclosed the P10 drive house.

July 2003

- Modified barge dust control systems (installed prior to shipping season). Modifications include:
 - Installed baghouse systems on each barge to control dust at transfer points
 - Raised and improved the seal on the barge canopy system
 - Modified the boom conveyor scraper system to eliminate carry-back
 - Modified the boom conveyor discharge chute
 - Upgraded scrapers and skirting on other conveyors.