



Snow Removal Procedure

Operations Procedures

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1.0 Purpose

This document provides a procedure for carrying out snow removal at the Squamish Terminals (SQT) site.

2.0 Overview

The procedure covers snow removal on the SQT site, responsibility for snow removal starts from the SQT sign on Third Avenue and covers the whole site.

3.0 Responsibility

Snow clearing shall be a function of and is the responsibility of all personnel on site. Management has the right to decide how best to handle the clearing of snow. At times a snow clearing gang may be brought in or the maintenance department may be expected to clear snow. In other situations any person, drivers, laborers, maintenance etc. may be turned to the clearing of snow and after the work areas are cleared and salted, return to their job.

In general, the drivers will be turned to snow removal equipment. A lift truck equipped with a bolster and the front-end loader are normally used for snow clearing. The laborers shall be responsible for the manual clearing of snow and the salting of walkways, stairs, ramps, etc. They shall also clear snow around rail switches and tie up bollards. Slingmen will be provided with salt boxes, brooms and shovels and will be responsible to keep their work area clear of snow and salted.

4.0 Snow Removal and Salting

4.1 Snow Removal

In general snow shall be cleared prior to salting. Snow is to be piled on the rip rap on the perimeter of the site as much as possible. The piling of snow on site is to be done only when it is not feasible to pile it on the rip rap.

When clearing snow:

- Snow should be placed at least 12ft from the tracks and the crossings.
- Snow must not be piled in a way that restricts CN visibility.
- When clearing the flangeways of any rail track, they must be cleared to a depth of at least 1.5”.
- When clearing rail tracks, leave area beside track for the CN crew to walk on.

When snow must be piled on site, consult with the Foreman or Superintendent as to where it should be piled.

4.2 Salting

Ploughing should be completed prior to salting to avoid wasting of salt. Salt is a corrosive material and should be used sparingly. Salt causes damage to vegetation, pollution of water supplies and corrosion of cars. Do not salt excessively.

When snow clearing gravel areas, salt should be avoided, it is preferable to use sand to produce a more efficient non-slip surface.

When salting using the salt spreader, ensure you have good visibility, keep the spreader at the tip of the forks.

5.0 Snow Clearing Priorities

Priorities for snow clearing are as follows:

NOTE: Priorities may change as circumstances vary. Safety, cargo flow and common sense are to be considered when setting new priorities.

- i) Prior to an expected snow fall, maintenance to drive the site and flag potential obstructions that could be buried or damaged.
- ii) The roadway leading into site, then the longshore and staff parking areas followed by the shop area and equipment parking area shall be cleared first with one machine. (Frontend Loader and/ or bobcat).
- iii) The berth(s) where vessel(s) are working and the rail line where receiving gangs are working shall be cleared with the other machine. (Bolster and / or bobcat).
- iv) Together the loader, bolster and/or bobcat machines will then clear roadways on site and remove the snow from all driving areas. They will also clear the areas around the maintenance department that is free of equipment and the staff parking areas.
- v) The labourers are to start clearing the walking entrance to site and site walkways to buildings, warehouses and berths. Other areas for laborers to work on are rail switches, bollards, trailers and any other area deemed necessary. When cleaning track, rail flange cleaner can be used. For switches, salt can be used sparingly or liquid deicer can be used.
- vi) Preparation for receiving and shipping cargo – clear working and storage areas of snow and ice to prep for cargo shipping and receiving.
- vii) In winter conditions when the salting machine is not in use, it is to remain under cover with the hopper loaded with salt. Also one of the H280's shall remain on lumber forks for use with the bolster as required.

6.0 Notes of Caution

Areas of caution to be aware of when clearing snow are:

- i) parking lots
- ii) around any fencing
- iii) around buildings
- iv) near equipment and vehicles
- v) along rail tracks and switches
- vi) along the bull rails on the berths
- vii) the near vicinity to any cargo
- viii) Berth 1 and 2 transition plates
- ix) SAAM Towage Dock walkway.

In order to avoid damage to the bull rails, they shall not be used as back-stops for the clearing of the snow.

Use caution when dumping snow onto rip rap as to not damage any guard rails or push them onto the rip rap.

Avoid pushing other debris, besides snow onto the rip rap.

Do not bury or block off any equipment, access ways, buildings, or safety gear with snow.

Clear snow and ice before laying down dunnage or cargo to ensure secure stowage and prevent cargo moving

Use caution when clearing snow along rip rap so as not to damage or move walkways (e.g. SAAM Towage Dock).

Berth 1 and 2 Transition Plate: The only way these transition plates are to be cleared of snow is by back blading them in the north/south direction with the loader. Do not clear snow in this area in an east/west direction as your machine may catch the lip and cause injury or damage. Any fine tuning for this area can be done with shovels and brooms if required.

When snow clearing any rail tracks on the off shifts or any time the rail line could come on site, use the blue flags available to keep the rail line off site. During nighttime we also have flashing blue lights that can be attached to the blue flags. Always remember to take all blue flags down when the work is completed.

When snow clearing gravel areas, salt should be avoided, it is preferable to use sand to produce a more efficient non-slip surface.

In extreme winter conditions, the use of a tiger torch may be used to clear ice from frozen switches, or for stubborn or emergency ice melting needs.

7.0 Winter Preparation List

Items to consider in fall to prepare for winter:

- GROOVES IN TRACKS
- LINES CALLS
- SALT BINS ON BERTHS
- ORDER SALT
- REVIEW SNOW REMOVAL PROCEDURE
- CHECK SHOVELS, BROOMS, TRACK BROOMS
- CHECK ALL WHEEL CHAINS FOR EQUIPMENT
- CHECK SALTERS
- SAND AVAILABLE
- CHECK BOLSTERS, CHAINS
- SERVICE LOADER
- SOURCE BACK-UP EQUIPMENT (E.G. RENTALS)
- SUPPLY OF CRAMPONS & HEAD LAMPS
- FLAGS TO IDENTIFY POTENTIAL BURIED OBSTRUCTIONS

In spring, all equipment should be checked, repaired, cleaned and appropriately stored, and any replacements required for the next year should be assessed.

Revision Record

Document	Rev	Date	Originator	Details of Change
PRO-023	1.0	2011-01-27	SQT	Original draft
PRO-023	2.0	2017-11-23	SQT	Updated to include Berth 1 transition plate, SMIT dock walkway, salting instructions, updated format
PRO-023	2.1	2018-10-03	SQT	Added section 7 Winter Preparation List, added Berth 2 to transition plate instructions section 6
PRO-023	2.2	2019-11-06	SQT	Updated section 5 -Added bobcat machine and flange cleaner available, switch clearing and gravel clearing requirements, section 6 added about using sand on gravel areas instead of salt.
PRO-023	2.3	2020-10-14	SQT	Updated section 4 and 5 to include CN requirements
PRO-023	2.4	2021-11-18	SQT	Reviewed by H&SC, changed SMIT dock name to SAAM Towage