



SAFE OPERATING PROCEDURES

SOP 3.6 – Venting and Uncovering Log Rows & Timber Stacks – Version 9.3

Purpose: To safely ventilate fumigated log rows and timber stacks, ensuring hazards are identified and the correct procedures are followed.

Responsibilities: Line Managers are responsible for ensuring workers have access to this document, receive instruction, training and supervision from a competent person, who signs off the trainee when they have demonstrated competence with this procedure.

All workers on site have a responsibility to ensure this procedure is followed.

All workers have a responsibility to report new hazards or unsafe conditions that are identified.

The Health, Safety & Compliance Team manage and maintain the Safe Operating Procedures with input from workers, Health & Safety Reps and Line Managers.

Review details: Annually before January 2022 or as required following changes. (See back page for review details).

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1. Purpose

To safely ventilate all fumigated log rows or timber stacks, ensuring the methyl bromide levels in the surrounding air does not exceed the allowable thresholds. The entire operation is performed ensuring any hazards are identified and the correct procedures are followed.

2. Relevant Documents

All operations must be carried out in conjunction with;

- The Control and Safe Use of Fumigants. Pest Management Association of New Zealand Code of Practice.
- Any operating rules issued by the PCBU who manages or controls the site you are operating at.
- Genera Risk Assessment (Person vs Mobile Plant & Vehicles)
- Daily toolbox meeting.
- EPA Methyl bromide fumigations - post-reassessment guidance for fumigators (April 2011).
- Genera's MPI approved phytosanitary procedures.
- Methyl Bromide Safety Data Sheet
- Workplace Exposure Standards
- *Shared Work Area Protocol – Log Yards (Mount Maunganui, Northport & Napier)
- *The above document is accessible on the Genera Intranet from the Health, Safety and Compliance drop down menu
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3. Personal Protection Equipment (PPE) Required

- Hard Hat.
- Steel Toe Footwear.
- Hi Visibility clothing.
- Self Contained Breathing Apparatus (SCBA) (must be carried and worn if necessary)
- Full face mask with new filter - AX filter with single brown ring (a half face can be used if wearing glasses makes a full face difficult to seal).
- A Calibrated Methyl Bromide Monitor to check for methyl bromide levels.



4. Vehicle Requirements

- Headlights on.
- Flashing Beacon on.
- Raised Vehicle Flags.
- Do NOT have vehicle hazard lights on.
- Vehicle ERP.

5. Assessment

The 'Shared Work Area Protocol' V4, must be followed before entering the log yard. Refer protocol policy.

- Ground staff near any active equipment must remain in the eyesight of the operator. Workers must remain visible to the operator at all times. The operator must always be facing the direction of travel
- Confirm with the stevedores when cargo will be required.
- Ensure the log rows or timber stacks have met the fumigation requirements:
 - Minimum fumigation period eg 16 or 24 hours.
 - Minimum temperature has been achieved.
- Ensure the log rows will be loaded within the post fumigation period eg 48 or 72 hours.
- Confirm the wind direction and the wind speed to enable the set up of the Safe working Zone and Monitored Safety Zone.
- The environmental monitoring technician needs to assess the monitoring conditions as required in SOP 3.7 and any adverse conditions communicated to supervisors and/or management prior to the toolbox meeting so that effective planning can be communicated and carried out.
- Wind speed current and forecast, is to be determined by using the local port Website or reputable local weather website i.e. The Met Service. An assessment on site where the venting is occurring is also required to ensure localized wind conditions are considered during planning.
- Any risks are to be determined by an authorised person (licensed technician or covering supervisor).
- If wind is a risk factor, increase supervision to check that extra control measures are followed and monitor for worsening conditions.
- Confirm no Genera workers are downwind from the fumigation area e.g. the scrubbing operation.
- Any risk assessment decisions are to be recorded in the toolbox record book.
- If wind is a risk factor, increase supervision to check that extra control measures are followed and monitor for worsening conditions:
 - High wind speeds are a hazard during ventings as they limit the ability to control the speed of tarp removal and the potential to have the tarp blown off the stack,
 - Low wind speeds are also a hazard as they limit the MBs ability to dilute once released from under the tarp so can increase the exposure risk to all Port workers and the general public. Slower tarp pulling speeds is required to limit the amount of MB being released each time the tarp is pulled. Venting in wind speeds below 2 knots should be avoided (Port of Tauranga MUST be avoided).

6. Preparation

6.1 Relevant Documentation

- Row list – this is to include the row number and volume in JAS.
- F13 Log Rows Record Sheet
- F14 Timber Stacks Record Sheet
- Marshaller's manifest list (if applicable)

6.2 Equipment

- Knife
- Cover Rolling Machine (CRM)
- Spike
- Venting and Monitoring in operation signage

6.3 Communications

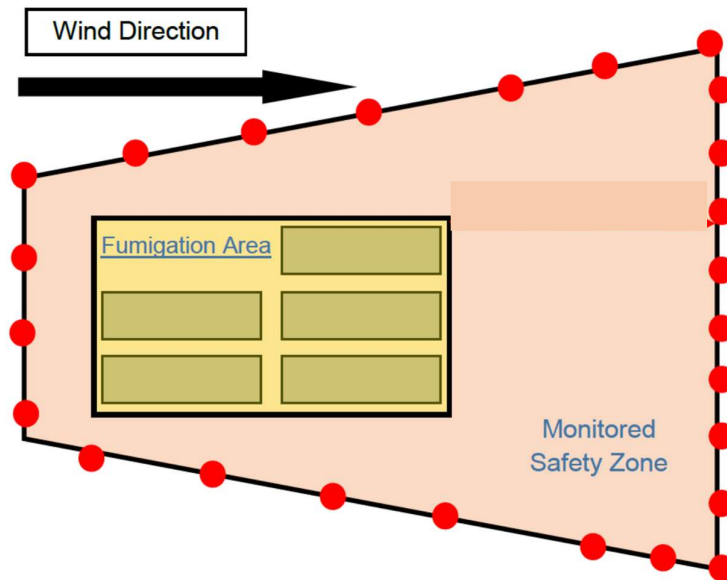
- Complete a 'daily plan', as per your port requirements.
- Complete a 'venting plan' with the relevant marshalling company, either in person or by phone.
- This plan is to be communicated to all relevant parties via daily plan. Genera workers are to speak with foreman of vessels or other contractors / port users in the vicinity, prior to venting – as per the 'Shared Work Area Protocol.'
- In this notification include the potential impact on venting times created by negative environmental impacts. If the wind speed is forecast to be below 10 knots slower venting may be required to control the release of MB to maintain compliance regarding the WES and TEL requirements set by the EPA and Worksafe. If the conditions are extremely bad and compliance during ventings cannot be ensured, they may have to be delayed until more favourable conditions are present. Head Office will support port staff where significant push back is experienced from other PCBU's impacted by these potential compliance issues.

Port of Tauranga cannot vent in wind speeds below 2 knots and other locations should follow suit.

6.4 Monitored Safety Zone (MSZ)

- Notify the marshallers in the area that you will be working.
- The MSZ MUST be set up before any venting and using cones and venting signs.
- Place "venting" signs at all access points.
- All venting signs are to be displayed at a minimum height of 1metre on a self-supporting stand and displayed in a prominent position.
- At Port of Tauranga, the signs are to be prominently displayed with the wording 'Danger Poisonous Gas Release In Progress' and attached to a flashing light.
- For Cub monitor placements and the required gas levels at the MSZ boundary refer *SOP 3.7 Air Monitoring During MB Ventilation*.
- The TVOC concentrations are to remain less than 15 ppm at the MSZ boundary for the entire operation. For further information regarding venting control processes see Section 4.1.3.1 of *SOP 3.7 Air Monitoring During MB Ventilation*.
- The downwind highest risk location and any other boundaries with other workers nearby must be monitored by a Genera Worker.
- If the gas levels increase, slow the venting down and / or increase the size of the MSZ.
- If the gas levels decrease – You may move the cones in.
- When venting a large volume of methyl bromide and or when there is little to no wind, start with a larger MSZ and / or vent much slower than normal

- When venting within 50 m from the water edge, an additional ventilation sign facing the water should be placed to advise any recreational boat to stay clear.
- All vehicles and machinery must be parked inside the coned off area.
- Only Genera trained workers are authorised to enter the MSZ.



7. Process

- If windy conditions make the process safer by:
 - Working in larger teams.
 - Increase supervision to check that extra control measures are followed and monitor for worsening conditions then introduce additional controls or stop the operation.

7.1 Dewatering

- Workers in the risk area, need to have a cub monitor with them, if the level is 100ppm move away unless wearing SCBA.
- As part of the venting control process, pop and vent one row to start with and assess MSZ boundary readings. If maintained well below 15 ppm, multiple rows can be popped if the readings do not exceed 15 ppm. If above 15 ppm continue to pop and vent each row individually until there is confidence less than 15 ppm can be maintained on the MSZ boundary.
- Lift the ends of the water tubing off the cover.
- Cut the water tubing at both ends – do not slash.



- Ensure the water does not run onto the cover.
- Direct the water tubing *away* from any storm water drains. Work to ensure no debris washes into the drains .



- Record the “End Time” on the F13 or F14.
- Allow the water flow to run out of the water tubing, rather than a water pool.
- From highest point run the remaining water out of the water tubing walking down the log row or timber stack lifting the tubing and walking down or between the row or stack.
- Pull the tubing out from between the row or stack and place in the vehicle or a set location.



- Monitor the levels of methyl bromide as per Section 6.4. Extend the MSZ or slow the venting accordingly.

7.2 Forklift Operations When Uncovering

Managers and Supervisors must plan their activity so that the forklift and operator work separately from the dewatering crew to minimize vehicle and person interaction. As Section 7.1, popping rows should be planned to minimize readings at the monitored safety zone boundary. Popping should be finished on a row before machinery approach to start pulling.

Where the need to have the forklift operating in the same area as pedestrians cannot be avoided, extreme care must be taken, and the steps followed below:

- Before driving into the operational area, the forklift driver is to stop to get the attention of all nearby workers, then wait until all nearby workers have acknowledged they have seen you and moved a safe distance away (at least 1.5m) before driving in
- When driving in the coned off area, the forklift must travel at walking speed only (5km/h)
- The forklift driver MUST beep twice when driving into the work area
- The forklift driver MUST ensure all areas around him are clear of other workers (at least 1.5m in all directions)
- The forklift driver must slow and check their turning arc before making a turn. The greatest risk of a collision is with the back of the forklift striking a worker when making a turn.
- If the forklift is moving, workers MUST NOT stand in front or behind the forklift or be within 1.5m of the sides of the forklift.
- During covering / uncovering, the stationary forklift may need to make minor adjustments. No workers are to be directly in front of behind the forklift and must stand clear of the wheels, so their feet do not get run over if the forklift moves a little with no notice. If the forklift is stationary and needs to move more than one meter:
 - Workers must move out of the direction of travel and be at least 1.5m away from the sides
 - The forklift driver is then to check that the area is clear before moving but only move in the direction they are facing.
- If at any time the forklift needs to make an adjustment or manoeuvre, follow the same procedure as above
- Workers must be aware of and look out for the forklift at all times and pay attention to any white noise or reversing alarms when inside the work area and be aware of their surroundings at all times.

7.3 Cover Rolling Machine (CRM)

7.3.1 Attaching the CRM to the forklift

- Insert the forklift forks into the CRM pockets.
- Secure the CRM to the forklift with the latch lock safety hooks.
- Lift the CRM to ensure it is off the ground when moving, a minimum of 500 mm.
- Proceed to the allocated row/stack, adhere to a controlled speed and be aware

of other vehicles.



7.3.2 Attaching the cover to the CRM

- Insert the pole into the CRM with the “drive end” at the motor end.
- Align the “drive end” with the motor and push the motor completely onto the pole.
- **Do not enter the CRM until the fork has come to a complete stop and forklift operator signals.**



- Ensure the CRM is in the center of the log row or timber stack.
- The forklift is to remain on and the handbrake is to be engaged.
- Position the forklift and CRM at the end where the cover will be rolled from, preferably up wind.
- The CRM operator is NOT to work alone when the CRM is in operation.
- The forklift operator must remain seated while the CRM is in use.
- Ensure any mechanical attachment is turned off before the CRM is turned off and before the CRM operator leaves the machine.
- The CRM is to remain off.
- Locate the centre of the cover and gather up.
- Place the cover through the guide bar of the CRM.
- Attach to the centre of the pole and secure the stop.

7.3.3 Rolling the cover up

- The forklift and CRM operators are to wear SCBA.
- Workers must not be in the ‘drop zone’ during uncovering, ie if log rows are being uncovered, all workers must be at least one row either side of a row

being uncovered in case a log gets dragged off.

- Start the CRM by turning the motor switch to the “on” position and turn the key.
- Adjust the engine revs with the accelerator lever to the maximum position.
- Take up the slack of the stop on the pole by engaging the hydraulic valve lever on the remote.
- Elevate the CRM to 1.370 meters to allow the excess water to drain off either side of the cover.



- A worker watching e.g. spotter, is to stand to the side of the CRM.
- An additional spotter is to stand at the rear of the log row being uncovered.
- Spotters must maintain a clear visual of each other and the CRM operator at all times.
- Start winding up the cover and keep close contact with the spotters. The Environmental Monitoring Technicians monitoring the downwind extent of the MSZ Boundary will control the speed a tarp is pulled based on Cub monitor readings. Clear and understandable directions need to be given to ensure an effective and compliant venting process is followed.
- The forklift may be required to assist with initial movement of the cover, if so, place the forklift in reverse and drive slowly backwards and forwards until the cover starts moving.
- Place the forklift into park or stationery position with the hand brake engaged.
- When removing the cover, continue to monitor the levels of methyl bromide, as per Section 6.4 extend the MSZ or slow the venting accordingly.
- Continue winding up the cover until it is completely off the log row or timber stack.
- **Keep hands and feet away from any moving parts.**
- **Do not push the cover in when in operation, the machine must be stopped.**



7.3.4 Attaching water tubing to the rolled cover

- Once the cover is off the log row/timber stack, leave enough tail protruding from the end of the CRM to attach the water tubing.
- Wrap the water tubing around the tail and tie securely.



- Signal to the forklift operator to continue rolling the cover up.
- Wrapping the water tubing around the cover as tight as possible until there is sufficient water tubing to secure the cover.

7.3.5 Removing the rolled cover from the CRM

- Place the cover on the ground.
- Disengage the drive end from the motor end.
- Once the frame has dropped, drive slightly forward manoeuvring the CRM at an angle to allow the pole to pass through the CRM frame when lifted up.
- Leave the cover in a safe location.

7.4 Removing rolled covers

- Attach the spike to the forklift and secure with a latch lock safety hook.



- Manoeuvre the forklift with spike and pick up the rolled cover.
- Ensure the spike is completely inserted before lifting.
- Lift the cover off the ground, at least 500mm above ground level.



- Proceed to allocated row or cover trailer in reverse, adhere to a controlled speed and be aware of other vehicles.
- The monitored safety zone can be removed after direct approval from the monitoring technician.
- Cones and signage must remain in place until the gas levels in all areas inside the coned off area remain under 5 ppm for 15 minutes.

8. Document Review History

Date	Document Name and Version	Reviewer
June 2016	SOP 3.6 Venting and Uncovering Log Rows V6.0	Mike Goss
February 2017	SOP 3.6 Venting and Uncovering Log Rows V7.0	Michelle Pomare
August 2017	SOP 3.6 Venting and Uncovering Log Rows V8.0	Michelle Pomare (Administration) / Julien Huteau
November 2017	SOP 3.6 Venting and Uncovering Log Rows V8.1	Michelle – Admin / Gavin Smales
December 2017	SOP 3.6 Venting and Uncovering Log Rows V8.1	Julien Huteau
December 2018	SOP 3.6 Venting and Uncovering Log Rows V9.0	Robert Maassen
January 2020	SOP 3.6 Venting and Uncovering Log Rows V9.1	Gavin Smales Michelle
June 2020	SOP 3.6 Venting and Uncovering Log Rows V9.2	Gavin Smales, Health, Safety & Compliance Team, Ops Managers
January 2021	SOP 3.6 Venting and Uncovering Log Rows V9.3	Beaven Edwards, Gavin Smales, Lisa Willams, Mike King, Josh Manning, Health, Safety & Compliance Team, Ma Ngatai, Harriet McChesney