

Genera Limited RM19-0663 Consent Conditions

Condition No.	Condition																				
A resource consent:	Pursuant to section 15(1)(c) and 15B of the Resource Management Act 1991 to Discharge Fumigants (Methyl Bromide, Phosphine and Ethanedinitrile) to air subject to the following conditions:																				
1. Purpose																					
1.0	<p>The purpose of this resource consent is to authorise and specify conditions for the discharge of contaminants to air (being Methyl Bromide (MB), Phosphine and Ethanedinitrile (EDN)) associated with fumigation activities at the Port of Tauranga, specifically:</p> <table border="1"> <thead> <tr> <th>Activity – fumigation of</th> <th>MB</th> <th>Phosphine</th> <th>EDN</th> </tr> </thead> <tbody> <tr> <td>Ship holds</td> <td>N</td> <td>Y</td> <td>N</td> </tr> <tr> <td>Under sheets</td> <td>Y</td> <td>Y</td> <td>Y (export logs and timber only)</td> </tr> <tr> <td>Containers</td> <td>Y</td> <td>Y</td> <td>Y (shipping containers for export logs and timber only)</td> </tr> <tr> <td>Silos</td> <td>N</td> <td>Y</td> <td>N</td> </tr> </tbody> </table>	Activity – fumigation of	MB	Phosphine	EDN	Ship holds	N	Y	N	Under sheets	Y	Y	Y (export logs and timber only)	Containers	Y	Y	Y (shipping containers for export logs and timber only)	Silos	N	Y	N
Activity – fumigation of	MB	Phosphine	EDN																		
Ship holds	N	Y	N																		
Under sheets	Y	Y	Y (export logs and timber only)																		
Containers	Y	Y	Y (shipping containers for export logs and timber only)																		
Silos	N	Y	N																		
2. Location																					
2.1	<p>The activity authorised by this resource consent shall be located:</p> <ul style="list-style-type: none"> a At Port of Tauranga, Tasman Quay and Sulphur Point wharfs; b At or about map reference NZMS 260 U14: 9232-8833; and c As shown on BOPRC Consent Plan RM19-0663/01 (Attachment 1). 																				
3. General Controls on all Fumigation Activities																					
3.1	Where multiple under sheet fumigations are within 200m of each other and the same fumigant has been used, during ventilation each individual sheet must be fully removed one at a time. The next sheet can only be removed after the complete removal of the previous one.																				
3.2	Fumigation signage is required at every point of entry to the buffer zone for those parts of a buffer zone that extend over land. Signage shall be consistent with the requirements of the Health and Safety at Work (Hazardous Substances) Regulations 2017. All signage shall be displayed and maintained to the satisfaction of the Compliance Manager, Bay of Plenty Regional Council.																				
3.3	Fumigation under sheets must not commence if the wind speed measured at the Port is in excess of, or predicted to be in excess of, 25 knots (13 m/s).																				
3.4	Ventilation of any fumigation event must not commence when an average wind speed of less than 2 m/s is measured at the site of fumigation during the 10-minute period prior to ventilation.																				
3.5	The consent holder must ensure that the sheets used for fumigation (where required) are maintained in a good working condition without rips and tears and are inspected regularly, to the satisfaction of the Bay of Plenty Regional Council.																				
3.6 Leak Detection and Management	<p>For all fumigation events, prior to fumigation the enclosure's suitability must be assessed with visible points of leakage remedied to prevent leakage before application commences.</p> <p>With the exception of ship hold and any slow release metal phosphide fumigations, a small amount of fumigant shall be initially introduced and monitoring undertaken</p>																				

Condition No.	Condition
	<p>around potential leakage points. If leaks are detected, remedial work shall be undertaken including, where appropriate, the use of sheets over containers, and leak check monitoring and management repeated.</p> <p>The balance of the fumigant is then introduced with ongoing leak checks and management during the application of the fumigant. Leak detection and MSZ Monitoring is undertaken using active monitoring techniques.</p> <p>If leaks cannot be reduced so that the investigative trigger levels specified in Condition 6.1 are met at the boundary of the MSZ, the fumigation event shall cease.</p>
3.7 Leak detection ship holds	<p>For all fumigation events utilising phosphine in the form of cylinderised phosphine in ship holds, the consent holder shall inspect the vessel for potential leakage points prior to the application of fumigant. No fumigation activities shall be undertaken if it is determined that appropriate containment cannot be achieved.</p> <p>From when the fumigant is first applied until immediately after the completion of fumigation when the application points are secured, the consent holder shall actively monitor all accessible areas of the vessel for fumigant leakage. If leaks are detected, remedial work shall be undertaken and leak check monitoring repeated.</p> <p>Leak detection and MSZ Monitoring shall be undertaken using active monitoring techniques.</p> <p>If leaks cannot be reduced so that the investigative trigger levels specified in Condition 6.1 are met at the boundary of the MSZ, the fumigation event shall cease.</p>
3.8	Fumigation activities shall not be undertaken within 150 metres from cruise ships docked at the Port.
3.9	All log row fumigation activities shall be located within the fumigation areas in accordance with the minimum setback distances appropriate to the treatment being undertaken identified on approved plan RM19-0663/1.
4. Notification	
4.1	<p>The Consent Holder shall provide notification of scheduled fumigation activities to the following parties at least 24 hours prior to fumigation commencing, unless in the event of an urgent request for fumigation when notification shall be provided at the earliest opportunity, and shall identify the location and type of fumigation to occur:</p> <ul style="list-style-type: none"> • Bay of Plenty Regional Council; • PCBUs adjacent to the fumigation activity, including Port of Tauranga and KiwiRail; and • Whareroa Marae. <p><i>Note: Notifications to Whareroa Marae shall cease if requested by the marae. The consent holder shall provide written confirmation of this arrangement to BOPRC upon request.</i></p>
4.2	The Consent Holder shall take immediate action to protect nearby workers and to immediately notify affected PCBUs and the Bay of Plenty Regional Council when other workers in the vicinity of the fumigation event could be exposed to potentially unsafe levels of fumigant that exceed the relevant workplace exposure standards.
4.3	<p>The Consent Holder shall notify Bay of Plenty Regional Council as soon as practicable, but no later than 24-hours of any:</p> <ul style="list-style-type: none"> • Actual or likely exceedance of the concentrations set out in conditions 9.2, 10.2 or 11.4 at the Port boundary; or • Uncontrolled release; or • Complaint.

Condition No.	Condition
	Notification of an uncontrolled release shall be through Bay of Plenty Regional Council's Pollution Hotline.
5. Monitoring	
5.1	<p>The consent holder shall establish and maintain a MSZ during application and for all single-pass recapture (for MB) and ventilation events.</p> <p>The purpose of the MSZ is to manage potential effects on human health by excluding unsupervised staff from the immediate area around the fumigation enclosure and to ensure workers in the vicinity are not exposed to fumigant concentrations that may be hazardous to human health. The size of the MSZ shall be adaptively managed. The monitoring criteria and occupational trigger values used to manage the boundary of the MSZ shall be set at concentrations that are calculated to achieve the current applicable workplace exposure standards and shall be documented in the Fumigation Monitoring and Reporting Plan (FMRP).</p>
5.2	Monitoring of fumigant concentrations shall be undertaken at, or within, the MSZ boundary downwind of the fumigation area during the application of fumigant, during ventilation and during single-pass recapture.
5.3	<p>During ventilation of a fumigant and single-pass recapture (for MB) the Consent Holder shall undertake and record monitoring data (including for wind-speed and direction). Additional specific requirements for MB, EDN and phosphine are as follows:</p> <ul style="list-style-type: none"> a For methyl bromide at the downwind port boundary: <ul style="list-style-type: none"> Data, including the concentration of MB measured as TVOCs, is to be recorded every 3 minutes from the start of single-pass recapture or ventilation until the exposure level at the port boundary monitoring location is below 0.05 ppm for at least: <ul style="list-style-type: none"> (i) 15 minutes, where 7 kg or more of methyl bromide is applied in a 1-hour period; or (ii) 3 minutes, where less than 7 kg of methyl bromide is applied in a 1-hour period. b For phosphine at the downwind port boundary: <ul style="list-style-type: none"> Data, including the concentration of Phosphine, is to be recorded every 3 minutes from the start of ventilation until the exposure level at the Port boundary monitoring location is 0.00 ppm for at least: <ul style="list-style-type: none"> (i) 15 minutes, where 7 kg or more of phosphine is applied in a 1-hour period; or (ii) 3 minutes, where less than 7 kg of phosphine is applied in a 1-hour period. c For EDN at the downwind port boundary: <ul style="list-style-type: none"> Monitor until the end of the buffer zone period which ends with the latest of the following: <ul style="list-style-type: none"> (i) at least 1 hour has lapsed since ventilation has been completed: (ii) measurements taken in the open air adjacent to the export logs or timber being fumigated in the enclosed space have, for a period of 15 minutes, continuously shown an airborne concentration of EDN below that of each workplace exposure standard. <p>In addition, for single-pass recapture (for MB) and ventilation events, where the downwind port boundary is over water or is greater than 50m from the MSZ boundary monitoring location:</p>

Condition No.	Condition
	<ul style="list-style-type: none"> - A static monitor must be placed at the downwind MSZ boundary to measure and record the investigative trigger values defined in condition 6.1. - The end of the ventilation period also requires the downwind static MSZ monitor to show fumigant concentrations are sustained below the relevant concentration value in Condition 6.1 (expressed as an instantaneous concentration) for a period of at least 3 minutes. <p><i>Note: For the purposes of this condition the static MSZ monitor will move as the MSZ is moved to continue to record the investigative trigger level at the MSZ boundary.</i></p>
5.4	For the fumigation of log rows under sheets, the consent holder shall ensure that periodic visual inspections of the fumigation area are undertaken for the duration of the fumigation event, as set out in the FMRP, to ensure that containment of the fumigant is maintained.
5.5 Wind Speed and Direction Data	<p>For monitoring and recording wind speed and direction immediately prior to and during single-pass recapture (for MB) and ventilation, the following shall apply:</p> <ol style="list-style-type: none"> 1. The location of the wind data must be recorded using GPS coordinates. 2. The recording of wind speed and direction data must start at least 10min prior to ventilation commencing. 3. The location of wind speed measurements should be within 50 m of the fumigation events, unless otherwise agreed with BOPRC. 4. Wind ribbons, or similar, shall be used to provide a visual indicator of the direction of gas travel during ventilation. 5. The wind speed and direction data must be measured at a height no less than 2m above ground level.
5.6	All monitoring specified in conditions 3.6 and 5.2 and 5.3 shall involve readings taken continuously and recorded every 3 minutes.
5.7	All data gathered as part of the implementation of this resource consent shall be retained for the duration of this consent and, unless required by other conditions, shall be provided to the Bay of Plenty Regional Council on request.
5.8	<p>Within two months of the commencement of this resource consent, the Consent Holder shall provide to the Bay of Plenty Regional Council for certification, an FMRP. At a minimum, the FMRP shall include the following:</p> <ol style="list-style-type: none"> a The minimum specifications for limit of detection, response time and accuracy for all instruments used to measure fumigant concentrations, wind speed and wind direction; b Procedures for calibration and maintenance of the selected instrumentation; c The selection of monitoring locations for wind speed and direction and fumigant concentration monitoring at the MSZ boundary and the Port boundary; d Methods to evaluate wind speed information, including data from Port of Tauranga weather stations and weather predictions, to confirm the fumigation and/or ventilation can proceed in accordance with minimum and maximum wind speed thresholds specified in conditions 3.3 and 3.4; e The methodology for monitoring EDN concentrations within the enclosed space prior to ventilation; f The methodology for calculating, monitoring and recording effective recapture of MB fumigation events; g The timing of commencement and duration of monitoring for each ventilation and single-pass recapture (for MB) event; h Methods for recording and reporting monitoring data;

Condition No.	Condition
	<ul style="list-style-type: none"> i The methods and frequency of visual inspections of fumigation areas as specified in condition 5.4; j The monitoring criteria and occupational trigger values used to manage the boundary of the MSZ for the protection of other workers, as required by condition 5.1; and k Procedure for monitoring at the MSZ boundary against the occupational trigger values and moving of the MSZ as required.
5.9	<p>The certified FMRP shall be updated as required and specifically to address any primary change to the operation or onsite conditions. The reviewed FMRP shall be provided to the Bay of Plenty Regional Council for recertification.</p> <p>For the avoidance of doubt, until the certification or recertification process is complete the immediately preceding equivalent plan shall be deemed to remain in effect.</p>
5.10	<p>If the parties cannot agree on the certification or recertification of the FMRP, the dispute shall be referred to a suitably qualified independent expert for review. If the outcome of this review does not result in agreement then it shall be referred to arbitration, undertaken by a suitably qualified and experienced dispute resolution professional agreed by both parties.</p>
5.11	<p>All fumigation monitoring and reporting is to be undertaken in accordance with the certified FMRP. If there is a conflict between the conditions of this resource consent and the requirements of the FMRP, the conditions of consent take precedence.</p>
5.12 – Best Practicable Option Review	<p>During years 4 and 9 following the commencement of this resource consent, the Consent Holder shall engage an independent suitably qualified and experienced expert agreed by the Bay of Plenty Regional Council, to provide a report that investigates whether the existing fumigation management and monitoring systems still represent the best practicable option. The investigation shall include (but not be limited to) the following:</p> <ul style="list-style-type: none"> • The methods and procedures used to verify fumigant investigative trigger levels at the MSZ boundary and fumigant levels at the port boundary during ventilation and single-pass recapture (for MB); • The monitoring devices used to determine compliance with the investigative trigger levels and ambient criteria, and any alternatives; • Procedures used to calibrate monitoring devices; • Where the device does not directly measure the fumigant of interest, the methods used to validate the representativeness of the results obtained against a reference monitoring method; • The effectiveness of the methods used to minimise the risk of members of the public being exposed to fumigant concentrations exceeding the ambient criteria set out in the conditions of this resource consent; • The appropriateness of recapture methods to minimise MB discharges; • Any exceedances of investigative trigger levels set in condition 6.1 and the trigger levels set in accordance with condition 5.1 at the MSZ boundary over the preceding four years and the outcome of any investigations; and • Any changes in best industry practice for fumigation. <p>If it is concluded by that review that the best practicable option has been redefined, the Bay of Plenty Regional Council may review the conditions of the resource</p>

Condition No.	Condition
	consent in accordance with section 128 of the RMA, or request that the consent holder seek a change to the conditions pursuant to section 127 RMA.
5.13	If the parties cannot agree on an expert or the recommendations of the Best Practicable Option review, the dispute shall be referred to arbitration undertaken by a suitably qualified and experienced dispute resolution professional agreed by both parties.
5.14	<p>a. Within six months of the commencement of this resource consent, the Consent Holder shall provide access for the Bay of Plenty Regional Council to video monitoring of all log fumigation activities on land, including applying the fumigant, containing the fumigant, recapturing and venting the log rows. At a minimum, the video monitoring shall meet the following criteria:</p> <ol style="list-style-type: none"> 1. Ensure that coverage is provided to include all areas where log fumigation will be undertaken, contained within the area shown on BOPRC Consent Plan RM19-0663/01; 2. The video feed shall be accessible in real time and remote access shall be provided to Council's Compliance Officers at all times; 3. The video feed shall be time and date stamped; 4. Cameras shall be positioned so as to provide full coverage of the fumigation activities, including the MSZ exclusion area, to the satisfaction of the Bay of Plenty Regional Council; 5. To meet criteria 4, cameras shall be of appropriate number and quality/resolution to ensure that accurate observations of activities are able to occur, including identification of the presence of signage and staff movements; 6. The data/footage captured by this video monitoring shall be stored for a minimum of 3 months, and shall be made available to the Bay of Plenty Regional Council within 5 working days of a request. 7. Providing all the above criteria are met, video monitoring may be provided by either access to existing Port of Tauranga cameras, the erection of cameras on existing infrastructure, or mobile cameras that are not fixed to port infrastructure. <p>Advice Note: The number of cameras provided will depend on their location and factors such as light glare and coverage.</p> <p>b. The cameras shall be maintained in good working order to the satisfaction of the Bay of Plenty Regional Council</p>
5.15 Ambient monitoring beyond Port boundary	<p>Within six months of the commencement of this resource consent, the consent holder shall commence a period of monitoring for MB concentrations in air at sensitive locations beyond the Port boundary.</p> <p>The MB monitoring programme shall comprise the following:</p> <ol style="list-style-type: none"> a Monitoring shall be undertaken at the following locations, or as close as practicable: <ol style="list-style-type: none"> i Adjacent to the Whareroa Marae; and ii Blake Park, adjacent to the Hockey Turf.

Condition No.	Condition						
	<p>b Sampling shall be undertaken using 6 litre whole air sampling canisters with an inert internal surface and shall be fitted with a flow controller capable of sampling over a 24-hour period.</p> <p>c Monitoring shall be undertaken over a 12 month period so that a minimum of 12 samples are collected at each site (24 samples in total).</p> <p>d To the extent practicable, at least 1 whole air canister sample shall be collected each month, at each location, on days where ventilation of MB fumigations of logs under sheets is undertaken and the wind is likely to be blowing towards the location of the canister for at least part of the day based on weather forecasts.</p> <p>e Samples shall be collected over a 24-hour period.</p> <p>f Samples shall be tested for MB by an IANZ accredited laboratory.</p> <p>The purpose of this monitoring programme is to understand the actual and potential exposure of Blake Park and the Whareroa Marae to MB.</p> <p>The sampling methodology may be reviewed prior to or after each sampling round to ensure that the monitoring programme listed in this condition remains appropriate and relevant to the purpose of the programme. Any changes shall only be undertaken on agreement between BOPRC and the consent holder.</p> <p>Within two months of receipt of the laboratory results for the final set of canisters, a report shall be provided to the Bay of Plenty Regional Council including the laboratory analysis sheets, a description of the monitoring methodology, calculations of the measured concentrations and a summary of the results in comparison with the 24-hour average average criterion specified in Condition 9.2.</p>						
5.16	<p>At the completion of ambient air monitoring at each location identified in condition 5.15, the consent holder shall engage a suitably qualified and experienced practitioner to evaluate the results and provide a report on the findings, including any recommendations for additional investigation or modification of the requirements of this resource consent.</p> <p>The report shall be provided to the Bay of Plenty Regional Council within 90 days of the device being removed and final analytical results received (if relevant).</p> <p>If the parties cannot agree on the findings and recommendations of the report, the dispute shall be referred to a suitably qualified independent expert for review. If the outcome of this review does not result in agreement then it shall be referred to arbitration, undertaken by a suitably qualified and experienced dispute resolution professional agreed by both parties.</p>						
Investigative Trigger Levels							
6.1	<p>In accordance with condition 5.3 where, during ventilation and single-pass recapture (for MB), the downwind port boundary is overwater or is greater than 50m from the MSZ boundary monitoring location, the results of the monitoring at the MSZ boundary must be compared with the following investigative trigger levels:</p> <table border="1" data-bbox="408 1825 1262 1966"> <thead> <tr> <th data-bbox="408 1825 852 1892">Fumigant</th> <th data-bbox="858 1825 1262 1892">Investigative trigger level (as a 15 minute average)</th> </tr> </thead> <tbody> <tr> <td data-bbox="408 1892 852 1933">Methyl bromide</td> <td data-bbox="858 1892 1262 1933">10 ppm</td> </tr> <tr> <td data-bbox="408 1933 852 1966">EDN</td> <td data-bbox="858 1933 1262 1966">10 ppm</td> </tr> </tbody> </table>	Fumigant	Investigative trigger level (as a 15 minute average)	Methyl bromide	10 ppm	EDN	10 ppm
Fumigant	Investigative trigger level (as a 15 minute average)						
Methyl bromide	10 ppm						
EDN	10 ppm						

Condition No.	Condition		
	<table border="1" data-bbox="408 203 1262 241"> <tr> <td data-bbox="408 203 852 241">Phosphine</td> <td data-bbox="852 203 1262 241">0.5 ppm</td> </tr> </table> <p data-bbox="408 293 1350 353">Where the monitoring shows that trigger levels set out above are exceeded, the following actions shall be taken:</p> <ol data-bbox="456 365 1401 757" style="list-style-type: none"> <li data-bbox="456 365 1401 483">1. All practicable steps will be taken to limit the ongoing discharge and reduce the concentration below the investigative trigger level at the location where the exceedance was first detected, including ceasing ventilation or ceasing removal of sheets; <li data-bbox="456 488 1401 548">2. An investigation shall be carried out as soon as practicable to determine the cause of the elevated fumigant levels; <li data-bbox="456 553 1401 613">3. The Bay of Plenty Regional Council shall be notified as soon as practicable, and no more than 24 hours after the event. <li data-bbox="456 618 1401 757">4. Within five working days of the event the Consent Holder shall submit a report to the Bay of Plenty Regional Council describing the monitoring results, actions taken, the likelihood that the concentrations of fumigant specified in conditions 9.2, 10.1 or 11.4 could have been exceeded at the Port boundary and any steps that will be taken to prevent recurrence. <p data-bbox="408 790 1401 882">The purpose of this condition is to identify when immediate action is needed to reduce the discharge of fumigant from an enclosed space to reasonably ensure that the TELs recorded at the Port boundary will be complied with.</p> <p data-bbox="408 916 1401 1160"><i>Advice Note: The investigative triggers have been calculated as figures indicative of compliance with the fumigant boundary concentration limit. The purpose of the trigger is to provide time sensitive information to the consent holder of potential non-compliance with the boundary criteria and to therefore instigate on site actions to reduce the risk of the discharge exceeding the boundary criteria, rather than as an enforcement measure. The investigative triggers are calculated at 10 times the one hour boundary criteria for each fumigant.</i></p> <p data-bbox="408 1193 1401 1249"><i>Notwithstanding anything in this condition, non-compliance with the TELs at the Port boundary may result in enforcement action.</i></p>	Phosphine	0.5 ppm
Phosphine	0.5 ppm		
7. Emergency Response Plan			
7.1	A copy of the consent holder's Emergency Response Plan (ERP) must be provided to the BOPRC for feedback annually during the month of May. Feedback shall be provided to the consent holder and incorporated into the ERP where appropriate.		
8. Recording and Reporting			
8.1	<p data-bbox="408 1487 1401 1547">The Consent Holder shall keep records of all fumigation events undertaken, and as a minimum, shall include the following specific information:</p> <ul data-bbox="496 1563 1401 1930" style="list-style-type: none"> <li data-bbox="496 1563 695 1592">• Job number; <li data-bbox="496 1608 1007 1637">• Name of person applying the fumigant; <li data-bbox="496 1653 1326 1749">• Date/time of when a) the fumigant was applied, b) when recapture commenced (if applicable) and c) when ventilation commenced (if applicable); <li data-bbox="496 1765 1401 1930">• GPS reading of the most downwind corner of fumigation enclosure. GPS readings should also be provided for the location of the fumigant monitoring equipment. GPS data should be provided in NZTM - New Zealand Transverse Mercator coordinate system in a format that can be copied in to the BOPRC system; 		

Condition No.	Condition																					
	<ul style="list-style-type: none"> • Detailed type of enclosed space fumigated e.g. under sheet, 40 ft container; ship hold; • The capacity of the enclosed space; • Type of product being fumigated; • The amount of fumigant introduced in the enclosed space at the beginning of fumigation and any top ups used; • The amount of fumigant in the enclosed space's head space at the end of the fumigation phase (for MB); • The amount of fumigant in the enclosed space's head space at the end of the recapture phase (for MB); • Where single-pass recapture is utilised for MB, the monitoring results for average and maximum values recorded through the exhaust; and • The recapture percentage for each event, as a percentage showing the calculations (for MB). 																					
8.2	The Consent Holder shall submit, electronically, a summary record of the monitoring required by condition 8.1 to the Bay of Plenty Regional Council, for each calendar month, within 10 working days after the end of the month, or as less frequently as may be agreed. Detailed records shall be made available on request.																					
8.3	The consent holder shall prepare an annual report for each fumigant, in accordance with the controls of EPA Decisions HSR001635 and HSR101529, and the equivalent information with regard to phosphine use. The annual report(s) shall be provided to the Bay of Plenty Regional Council by no later than 30 June each year.																					
9. Methyl Bromide																						
9.1	<p>The consent holder shall identify and maintain a minimum port boundary setback distance in accordance with the following tables. The boundary setback distance apply from when an enclosed area is being fumigated with MB until ventilation is concluded in accordance with condition 5.3.</p> <table border="1" data-bbox="408 1234 1362 1384"> <thead> <tr> <th>Container</th> <th>Minimum Boundary Setback distance</th> </tr> </thead> <tbody> <tr> <td>Up to 77 m³</td> <td>10 m</td> </tr> <tr> <td>>77 m³</td> <td>25 m</td> </tr> </tbody> </table> <p>Under Sheet</p> <table border="1" data-bbox="408 1469 1362 1682"> <thead> <tr> <th rowspan="2">Minimum Recapture</th> <th colspan="3">Minimum Boundary Setback distance</th> </tr> <tr> <th>dose rate ≤ 40 g/m³:</th> <th>40 g/m³ < dose rate ≤ 72 g/m³:</th> <th>72 g/m³ < dose rate ≤ 120 g/m³:</th> </tr> </thead> <tbody> <tr> <td>90%</td> <td>50 m</td> <td>110 m</td> <td>150 m</td> </tr> <tr> <td>99%</td> <td>50 m</td> <td>70 m</td> <td>95 m</td> </tr> </tbody> </table>	Container	Minimum Boundary Setback distance	Up to 77 m ³	10 m	>77 m ³	25 m	Minimum Recapture	Minimum Boundary Setback distance			dose rate ≤ 40 g/m ³ :	40 g/m ³ < dose rate ≤ 72 g/m ³ :	72 g/m ³ < dose rate ≤ 120 g/m ³ :	90%	50 m	110 m	150 m	99%	50 m	70 m	95 m
Container	Minimum Boundary Setback distance																					
Up to 77 m ³	10 m																					
>77 m ³	25 m																					
Minimum Recapture	Minimum Boundary Setback distance																					
	dose rate ≤ 40 g/m ³ :	40 g/m ³ < dose rate ≤ 72 g/m ³ :	72 g/m ³ < dose rate ≤ 120 g/m ³ :																			
90%	50 m	110 m	150 m																			
99%	50 m	70 m	95 m																			
9.2	<p>The consent holder must ensure that the concentration of methyl bromide does not exceed the following limits at the Port boundary:</p> <table border="1" data-bbox="408 1765 1362 1935"> <thead> <tr> <th>Concentration</th> <th>Averaging period</th> </tr> </thead> <tbody> <tr> <td>1 ppm</td> <td>1-hour</td> </tr> <tr> <td>0.333 ppm</td> <td>24-hour</td> </tr> <tr> <td>0.0013 ppm</td> <td>annual</td> </tr> </tbody> </table>	Concentration	Averaging period	1 ppm	1-hour	0.333 ppm	24-hour	0.0013 ppm	annual													
Concentration	Averaging period																					
1 ppm	1-hour																					
0.333 ppm	24-hour																					
0.0013 ppm	annual																					

Condition No.	Condition								
9.3	<p>All MB fumigation activities shall be subject to recapture. The minimum recapture percentage shall be as follows:</p> <ul style="list-style-type: none"> • From the commencement of this resource consent, at least 90% for all Methyl Bromide fumigation activities. • No later than 1 January 2031, at least 99 % for all container Methyl Bromide fumigation events. 								
9.4	<p>For each MB fumigation event, the consent holder shall report calculations and monitoring results confirming that effective recapture has occurred. As a minimum, the information reported shall include:</p> <ul style="list-style-type: none"> • the concentration of MB in the fumigation enclosures headspace at the end of fumigation, prior to commencement of the recapture phase; • the target recapture, as a percentage; • the target maximum final concentration of MB in the fumigation enclosures headspace at the end of the recapture phase, to achieve the target recapture percentage; • the final concentration of MB in the fumigation enclosures headspace, at completion of the recapture phase; and • Where the recapture process is a single pass, meaning the exhaust from the recapture unit is discharged to air and not recycled back into the enclosed space: <ul style="list-style-type: none"> ○ the concentration of MB in the exhaust from the recapture unit measured as TVOCs shall be recorded at least every 15 minutes over the entire period of recapture, using an appropriately sensitive device. ○ Reporting of the concentration of MB measured as TVOCs in the exhaust from the recapture unit is limited to the average and maximum values recorded. Detailed records are to be provided on request. ○ Monitoring of fumigant concentrations at the MSZ boundary shall be undertaken as described in condition 6.1. <p>MB readings for determining headspace concentrations shall be measured in accordance with the FMRP.</p> <p>The device used to monitor the concentration of MB measured as TVOCs in the exhaust from the recapture unit shall be capable of measuring to 1.0 ppm or below.</p> <p>The requirements of this condition shall be included in the monthly report to the Bay of Plenty Regional Council required in condition 8.2.</p>								
10. Phosphine									
10.1	<p>The consent holder shall identify and maintain a minimum port boundary setback distance in accordance with the following table. The boundary setback distance shall apply from when an enclosed area is being fumigated with phosphine until ventilation is concluded.</p> <table border="1" data-bbox="408 1729 1276 1966"> <thead> <tr> <th data-bbox="408 1729 842 1800">Fumigation type</th> <th data-bbox="842 1729 1276 1800">Minimum Boundary Setback distance</th> </tr> </thead> <tbody> <tr> <td data-bbox="408 1800 842 1841">Containers</td> <td data-bbox="842 1800 1276 1841">50 m</td> </tr> <tr> <td data-bbox="408 1841 842 1901">Under sheets</td> <td data-bbox="842 1841 1276 1901">50 m</td> </tr> <tr> <td data-bbox="408 1901 842 1966">Silo (top venting only)</td> <td data-bbox="842 1901 1276 1966">10 m</td> </tr> </tbody> </table>	Fumigation type	Minimum Boundary Setback distance	Containers	50 m	Under sheets	50 m	Silo (top venting only)	10 m
Fumigation type	Minimum Boundary Setback distance								
Containers	50 m								
Under sheets	50 m								
Silo (top venting only)	10 m								

Condition No.	Condition						
	<p><i>Advice Note: The minimum boundary setback distances for phosphine are based on limited monitoring data and therefore have been set using conservative assumptions. Further monitoring investigations are proposed to be undertaken, as per condition 10.4, with the result of this work being used to assist in future reviews of the setbacks. The reduced setback for silos reflects venting occurring at the top, which results in separation from adjacent activities.</i></p>						
10.2	<p>The consent holder must ensure that the concentration of phosphine does not exceed the following limits at the port boundary:</p> <table border="1" data-bbox="408 524 1270 658"> <thead> <tr> <th data-bbox="408 524 842 568">Concentration</th> <th data-bbox="849 524 1270 568">Averaging period</th> </tr> </thead> <tbody> <tr> <td data-bbox="408 568 842 613">0.05 ppm</td> <td data-bbox="849 568 1270 613">1-hour</td> </tr> <tr> <td data-bbox="408 613 842 658">0.02 ppm</td> <td data-bbox="849 613 1270 658">24-hour</td> </tr> </tbody> </table>	Concentration	Averaging period	0.05 ppm	1-hour	0.02 ppm	24-hour
Concentration	Averaging period						
0.05 ppm	1-hour						
0.02 ppm	24-hour						
10.3 Ship Hold Signage	<p>For the duration of all fumigation activities utilising cylinderised phosphine in ships holds, from immediately prior to the commencement of application until the completion of fumigation when all application points are sealed, the consent holder shall ensure that the ship displays harbour facing signage. The signage shall be no less than 3 m wide by 1 m high and shall display the message 'Keep Clear Fumigation in Progress'. The purpose of the signage is to advise members of the public of fumigation activities being undertaken where they are approaching from a seaward direction.</p>						
10.4	<p>Within 12 months of the commencement of this resource consent, the consent holder shall undertake an investigation of the appropriateness of the minimum setback distances specified in Condition 10.1.</p> <p>Where similar fumigation activities are being undertaken on this or any other site, the investigation shall include monitoring of fumigant concentrations. The phosphine monitoring programme shall comprise:</p> <ul style="list-style-type: none"> a A minimum of 6 monitoring events on separate days where ventilation of phosphine fumigation is undertaken. b Monitoring at downwind transects spaced in 10 m intervals, for a length of up to 50m, where practicable. <p>Where similar fumigation activities are not available to be monitored, or the monitoring device cannot reliably measure to levels of 0.01 ppm, the investigation shall include atmospheric dispersion modelling to predict worst case fumigant concentrations with distance. The dispersion modelling shall be undertaken to the satisfaction of the Bay of Plenty Regional Council.</p> <p>Within two months of completion of these investigations, a report by an independent suitably qualified and experienced expert shall be submitted to the Bay of Plenty Regional Council describing the investigations undertaken and confirming appropriate minimum setback distances to ensure that the concentration of phosphine does not exceed the limits set in Condition 10.2 at the port boundary.</p> <p>If it is concluded by the investigation that the minimum setback distances can be changed, the consent holder may seek a change to the conditions pursuant to section 127 RMA.</p>						
11. Ethaneditrile							
11.1	<p>The consent holder shall identify and maintain a minimum port boundary setback distance in accordance with the following table. The boundary setback distance shall</p>						

Condition No.	Condition						
	<p>apply from when an enclosed area is being fumigated with EDN until ventilation is concluded.</p> <table border="1"> <thead> <tr> <th>Fumigation type</th> <th>Minimum Boundary Setback distance</th> </tr> </thead> <tbody> <tr> <td>Containers</td> <td>50 m</td> </tr> <tr> <td>Under sheets</td> <td>50 m</td> </tr> </tbody> </table>	Fumigation type	Minimum Boundary Setback distance	Containers	50 m	Under sheets	50 m
Fumigation type	Minimum Boundary Setback distance						
Containers	50 m						
Under sheets	50 m						
11.2	Ventilation of EDN must be carried out only during the hours between sunrise and sunset.						
11.3	No ventilation of the fumigation enclosure shall occur until the concentration of EDN within the enclosure is at or below 700ppm. The method of sampling shall be in accordance with section 9 of the Worksafe New Zealand document titled 'Health and Safety at Work (Hazardous Substances— Requirements for Specified Fumigants) Amendment Safe Work Instrument 2022'.						
11.4	<p>The consent holder must ensure that the concentration of EDN does not exceed the following limits at the Port boundary:</p> <table border="1"> <thead> <tr> <th>Concentration</th> <th>Averaging period</th> </tr> </thead> <tbody> <tr> <td>1 ppm</td> <td>1-hour</td> </tr> <tr> <td>0.034 ppm</td> <td>24-hour</td> </tr> </tbody> </table>	Concentration	Averaging period	1 ppm	1-hour	0.034 ppm	24-hour
Concentration	Averaging period						
1 ppm	1-hour						
0.034 ppm	24-hour						
12. Review of Conditions							
12.1	<p>The Bay of Plenty Regional Council may serve notice on the consent holder during April or October of each year, under s128(1)(a)(iii) and/or s128(1)(b) and/or s128(1)(ba) of the Resource Management Act of its intention to review the conditions of this consent. The purpose of such a review is to:</p> <ul style="list-style-type: none"> a Review the adequacy of any monitoring requirements and incorporate into the consent any auditing, monitoring or reporting requirements that are necessary to deal with any adverse effects on the environment arising from the exercise of this consent or legislative/environmental policy change; or b To assess the need for changes to the conditions of this consent as a result of the independent audit/BPO review undertaken in accordance with condition 5.12, including changes to technology enabling increased recapture rates; or c To assess the need for changes to the conditions of this consent to reflect the ambient air monitoring results required by condition 5.15; and d To assess the need for changes to the conditions of this consent to reflect changes to accepted air quality standards for the fumigants; or e Deal with any unanticipated more than minor adverse effect on the environment which may arise from the exercise of this consent. <p>The fair and reasonable costs associated with any such review shall be recovered from the consent holder.</p>						
13. Resource Management Charges							
13.1	The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.						
14. Term of Consent							
14.1	This consent shall expire on 5 th October 2033.						
15. The Consent							
15.1	The Consent hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.						

Advice Notes	
1	The consent holder is required to comply with all other statutory requirements and obligations including (but not limited to) the Hazardous Substances and Natural Organisms (HSNO) Act and the Health and Safety at Work (HSW) Act.
2	The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.
3	The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.
4	Email all monitoring reports and notification required by these conditions to the Regulatory Compliance Manager, at notify@boprc.govt.nz . Include the consent number RM19-0663 and the consent holder's name.
5	The consent holder is advised that where the BOPRC needs to be notified immediately in relation to any of the requirements of this consent they should call Bay of Plenty Regional Council's Pollution Hotline 0800 884 883.

Acronyms and Definitions

<u>Acronyms</u>	<p>EPA the Environmental Protection Authority.</p> <p>PCBU, person conducting a business or undertaking, has the meaning defined in section 17 of the Health and Safety at Work Act 2015.</p> <p>ppm parts per million, a measure of gas concentration.</p> <p>TEL Tolerable Exposure Limit is a limit on the concentration of a substance (over a specified averaging period) set under 77B of the Health and Safety at Work (Hazardous Substances) Regulations 2017 or by EPA Notice</p> <p>WES Workplace Exposure Standard are values that refer to the airborne concentration of substances, at which it is believed that nearly all workers can be repeatedly exposed to day after day without coming to harm.</p>
------------------------	--

<u>Definitions</u>	
---------------------------	--

	<p>Boundary setback distance means, for the purposes of this consent, the minimum distance the fumigation enclosure must be from any port boundary.</p> <p>Container means anything used to contain [a fumigant] during fumigation, except a ship’s hold or sheet.</p> <p>Enclosed space (also ‘enclosure’) means a container, a ship’s hold, or the space under a sheet.</p> <p>Fumigation event means the fumigation of one enclosed space</p> <p>Minimum Recapture means the minimum reduction of methyl bromide from the maximum amount of methyl bromide in the enclosed space that must be achieved for a fumigation event. For the purposes of this consent, this is achieved by taking a concentration reading inside the fumigation enclosures headspace at the end of fumigation before recapture is applied, then running the recapture equipment until the measured concentration inside the fumigation enclosures headspace is below the required percentage. For example, if a log row has a headspace concentration of 40 g/m³ at the end of fumigation and requires 90% recapture, then recapture will continue until readings are at or below 4 g/m³ inside the enclosures headspace.</p> <p>Monitored Safety Zone/Risk Area means a restricted area around the fumigated enclosed space in place from when the fumigant is applied until the completion of ventilation into which unsupervised staff may not enter. For the avoidance of doubt, the boundary of this area will move to reflect variable discharges of fumigant from the enclosed space to ensure that an acceptable level of risk is maintained beyond the MSZ boundary.</p> <p>Port boundary a. the landward boundary is the Port security boundary (which defines the Customs Controlled Area (CCA)) and b. the seaward boundary is the limit of the harbourmaster’s jurisdiction in the CMA, either 50m seaward from the face of the wharves or Mean High Water Springs, or 50m seaward of any berthed ship For the purposes of this consent the Port boundary and the buffer zone boundary are the same. See Resource Consent Plan RM 19-0663/01 (Attachment 1).</p> <p>Sheet (also called a ‘tarpaulin’)</p>
--	---

means a heavy-duty cover that—

- a has a low mass transfer coefficient for fumigants; and
- b is waterproof.

Silo

means a purpose-built container for the storage of grain, flour, palm-kernel or similar bulk product.

Total Volatile Organic Compounds (TVOCs)

Are a summation of all VOCs. VOCs are organic compounds which have a vapour pressure greater than 0.01kPa or more at 20°C.

Ventilate

means, for methyl bromide, ethanedinitrile and phosphine, the release of a fumigant into the atmosphere following fumigation or recapture, where relevant, as part of the treatment process, and ventilation has a corresponding meaning.

Attachment 1: BOPRC Consent Plan RM19-0663/01

