## FSC-TPL-30-001 Application for a temporary derogation to use a ‘highly hazardous’ pesticide

### A. General Requirements

| Application submission date | SCS Global Services  
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|----------------------------|---------------------------------------------------------------|
| Name and contact details of certification body submitting the derogation: | Picloram (CAS No 1918-02-1)  
Aerial boom, Ground based boom, hand gun, knapsack at 600 kg of active ingredient. per annum. |
| Active ingredient for which a temporary derogation is being requested: | Picloram (CAS No 1918-02-1)  
Aerial boom, Ground based boom, hand gun, knapsack at 600 kg of active ingredient. per annum. |
| Trade name and formulation type of the Pesticide: | Grazon Ds Herbicide EC  
4farmers Tri-Pick Herbicide EC  
Generex Trichloram Herbicide EC  
Imtrade Picker Herbicide EC  
Grass-Up Herbicide EC  
Kenso Agcare Ken-Zon Herbicide EC  
Fightback Herbicide EC  
Nufarm Conqueror Herbicide EC  
Halley Triclozon Herbicide EC  
Pickout Herbicide EC  
Grazon Extra Herbicide EC  
Conquest Hatchet Herbicide EC  
Token Herbicide EC  
Genfarm Triclopyr/Pic Herbicide EC  
Aw Gnarly Herbicide EC  
Titan Picloram + Triclopyr 400 Herbicide EC  
Superway Tri-Pic Herbicide EC  
Accensi Picloram/Triclopyr Herbicide EC  
Agrismart Woodpecker Herbicide EC  
Apparent Woody Herbicide EC  
Farmalinx Tripicloram 400 Herbicide EC  
Tripiculo Herbicide EC  
Acp Regrowth Herbicide EC  
Apparent Brush 'N' Wood Herbicide EC  
Mission Picloram 100 Ec Herbicide EC  
Fmc Triclopyr + Picloram Herbicide EC  
Ac Scrubba Herbicide EC  
Rainbow Triclopyr/Picloram Herbicide EC  
Ozcrop Triclopyr/Picloram Herbicide EC  
Surefire Raizon Herbicide EC |
| Method of application and the application equipment and intended quantities: | Picloram (CAS No 1918-02-1)  
Aerial boom, Ground based boom, hand gun, knapsack at 600 kg of active ingredient. per annum. |
| Common or Scientific name of the pest (or description of the problem/issue, as applicable) | Various woody weeds, *Eucalypt* and *Corymbia* spp. coppice |
| Name and FSC certification codes of certificate holders requesting a temporary derogation. Please indicate scale category and whether it qualifies as a SLIMF. | HQ Plantations Pty Ltd  
Certificate Code: SCS-FM/COC-00148P  
License Code: FSC-C107541  
Large |
| Scope for which a temporary derogation is being requested: (Please attach map is possible). | Queensland |
| Type of Forestry, species and expected forest area where use of the HHP is intended. | Approximately 2,000 hectares per annum of plantations of the following species groups:  
*Southern Pine* (including *Pinus elliottii var. elliottii* (PEE), *Pinus caribaea var. hondurensis* (PCH), *Pinus caribaea var. caribaea* and *PEE x PCH hybrids*) and  
*Hardwood species* (*Eucalyptus* and *Corymbia* spp.) |

**DEMONSTRATED NEED**

a) Please describe briefly the silvicultural system (methods for site preparation, practices for harvesting, regeneration, time between rotations) in the MU(s) included in the scope of the requested derogation.

b) Please describe the Integrated Pest Management (IPM) system in place, including the plan to monitor the distribution and density of the targeted pest organisms in the MU(s).

c) Please indicate the thresholds above which, the damages caused by the targeted pest organisms are classified as severe and how they have been established.

d) Please indicate the population size of the targeted pest organism in the MU(s).

e) (Fill in only if you represent a large-scale MU)  
Please indicate the conclusions of the comparative Cost/Benefit Analysis of using the requested pesticide versus other non-highly hazardous control alternatives.

The cost – benefit analysis shall include, at minimum, the following scenarios:
- no action vs. remedial control (short-term)
- no action vs. preventive practices (long-term)

f) (Fill in only if you represent a large-scale MU)  
Please provide a review carried out by independent experts of the Cost/Benefit Analysis in e).

g) (Fill in only if you represent a medium or small-scale MU)  
Please describe possible non HHP alternatives to the use of the requested HHP and explain why they are not considered feasible to control the targeted pest organisms.

h) Please include an estimate of the amount of area over which the pesticide is to be applied and how much of the pesticide is expected to be used annually.

i) (Fill in only if you are applying for the renewal of a derogation)  
Please attach a report on the implementation of the IPM system during the previous derogation period, covering at minimum:

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1 In the case of forest management enterprises applying for FSC certification, the FSC certificate holder code can be provided at a later stage, if and when the company achieves certification.
Control of annual, perennial and woody weeds is essential for the successful establishment and growth of plantations in Australia and New Zealand. Without weed control, crop trees may die due to inability to compete for water and nutrients, or growth rates may be so low that timber production becomes uneconomic. Effects can range from widespread mortality in new plantings to severe suppression of entire stands for indefinite periods, de-topping, butt and stem malformation, severe impediment to access and forest working or exacerbated fire hazard. The beneficial effects of weed control are well documented (e.g. (Knowe et al., 1985; Boosma and Hunter, 1990; Richardson, 1993; Smale, P. 2004; Woods et. al., 1992; Adams et al. 2003; George and Brennan, 2002). It has also been shown that good weed control can reduce the susceptibility and severity of insect (Michael and Zhong, 2004) and disease attacks on seedlings (Nambiar, 1990), thus, reducing or eliminating the need to apply pesticides to control such pests.

The weeds with the biggest impact on productivity when considering competition for resources are weeds that are perennial and in particular, weeds that compete with crop trees in time of resource limitation. In Queensland, there are number of vigorous competing weeds such as Melalueca and Eucalyptus regrowth, which are both difficult and expensive to kill. Picloram is present in the product Grazon Extra (along with a number of different generics with identical active ingredients) and importantly, is registered for a broad range of application methodologies and a broad range of woody weed species. Picloram in the formulation described is the only herbicide available with the desired weed control spectrum and that is able to be used in Queensland. All other herbicide options that may have the desired spectrum of control are not registered for the use situation, application methodology and weed spectrum necessary.

In addition to woody weed control, in the same formulation described above, picloram is also used to control coppiced eucalypt and corymbia spp. These species which are grown in a saw log regime are routinely thinned to reduce competition between trees in order to produce a tree that is both sufficiently tall and has a large diameter to make a saw log grade product. Unfortunately, these species which are desirable from a sawn product perspective also are known to coppice prolifically. Coppice is the reshooting of cut stumps from either epicormic shoots or lignotubers. Due to the stored carbohydrate in the roots of cut trees, coppice is extremely vigorous and competes with remaining crop trees. In order to reduce this competition, control is required. Picloram in the product Grazon or similar formulation provides excellent control of coppicing stumps and also does not lead to excessive flashback. Flashback is the mortality or injury to crop trees from application of herbicide to adjacent trees, coppice or stumps due to translocation of herbicide through root grafting. There are numerous examples of where glyphosate has been used to control coppice in blue gum plantations for example and flashback has led to either severe crop injury or even mortality. There is limited possibility for biocontrol (some fungi are known to infect cut stumps and cause mortality) in this situation as infection of cut stumps or coppice may risk the health and growth of remaining crop trees. Picloram therefore is the only economically, socially and environmentally viable method of control for coppice in thinned stands of eucalypt and corymbia stands in Queensland.


**SPECIFIED CONTROLS TO PREVENT, MINIMISE AND MITIGATE HAZARDS.**

a) Description of the nature of the controls that will be implemented for the use of the derogated pesticide to prevent, mitigate and minimize any deleterious effects on ecological, social and economic values within and beyond the management unit.

b) References to national laws/ regulations on safety measures should be made and any additional safety measures to supplement these laws/ regulations should be stated.

c) Optional: Description of any relevant site-specific conditions that might mitigate likely negative effects resulting from the derogated pesticide) and/or description of mitigating properties specific to the formulation/ product used.
In Australia the Australian Pesticides & Veterinary Medicines Authority (APVMA) is responsible for the registration and control of herbicides up to the point of retail sale. The registration process is governed by Commonwealth legislation and undertaken according to accepted scientific principles and through rigorous independent analysis by several government agencies and the APVMA. Before being registered for sale, products must go through a risk assessment process and specifically meet the requirements of the Agvet Code 5a with regard to safety of the environment and humans:

(1) An active constituent or chemical product meets the safety criteria if use of the constituent or product, in accordance with any instructions approved, or to be approved, by the APVMA for the constituent or product or contained in an established standard:

(a) is not, or would not be, an undue hazard to the safety of people exposed to it during its handling or people using anything containing its residues; and

(b) is not, or would not be, likely to have an effect that is harmful to human beings; and

(c) is not, or would not be, likely to have an unintended effect that is harmful to animals, plants or things or to the environment.

(2) For the purposes of being satisfied as to whether an active constituent meets the safety criteria, the APVMA:

(a) must have regard to the following:

(i) the toxicity of the constituent and its residues, including metabolites and degradation products, in relation to relevant organisms and ecosystems, including human beings;

(ii) the method by which the constituent is, or is proposed to be, manufactured;

(iii) the extent to which the constituent will contain impurities;

(iv) whether an analysis of the chemical composition of the constituent has been carried out and, if so, the results of the analysis;

(v) any conditions to which its approval is, or would be, subject;

(vi) any relevant particulars that are, or would be, entered in the Record for the constituent;

(via) whether the constituent conforms, or would conform, to any standard made for the constituent under section 6E to the extent that the standard relates to matters covered by subsection (1);

(vii) any matters prescribed by the regulations; and

(b) may have regard to such other matters as it thinks relevant.

(3) For the purposes of being satisfied as to whether a chemical product meets the safety criteria, the APVMA:

(a) must have regard to the following:

(i) the toxicity of the product and its residues, including metabolites and degradation products, in relation to relevant organisms and ecosystems, including human beings;
(ii) the relevant poison classification of the product under the law in force in this jurisdiction;

(iii) how the product is formulated;

(iv) the composition and form of the constituents of the product;

(v) any conditions to which its registration is, or would be, subject;

(vi) any relevant particulars that are, or would be, entered in the Register for the product;

(via) whether the product conforms, or would conform, to any standard made for the product under section 6E to the extent that the standard relates to matters covered by subsection (1);

(vii) any matters prescribed by the regulations; and

(b) may have regard to one or more of the following:

(i) the acceptable daily intake of each constituent contained in the product;

(ii) any dietary exposure assessment prepared under subsection 82(4) of the Food Standards Australia New Zealand Act 1991 as a result of any proposed variation notified under subsection 82(3) of that Act in relation to the product, and any comments on the assessment given to the APVMA under subsection 82(4) of that Act;

(iii) whether any trials or laboratory experiments have been carried out to determine the residues of the product and, if so, the results of those trials or experiments and whether those results show that the residues of the product will not be greater than limits that the APVMA has approved or approves;

(iv) the stability of the product;

(v) the specifications for containers for the product;

(vi) such other matters as it thinks relevant.


APVMA take a risk management approach to product registration which includes the imposition of conditions on product approvals or registrations. These conditions of use are legally enforceable strategies to reduce risk. Further, the Agvet Code regulations allow APVMA to restrict the use of certain chemicals that have a high risk profile so that only persons with additional training, licensing and compliance steps may purchase or use a pesticide. These conditions include detailed label instructions for safe use and associated Material Safety Data Sheets (MSDS) for the safe handling and application of pesticides. Label/MSDS instructions include details for mixing, treatment rates, protection of wildlife, protection of non-target plants, storage, disposal, operator safety and first-aid.

Registrants must provide the APVMA with information about the product to allow independent evaluators to decide whether it is effective and safe for people, animals and the environment, and not a trade risk. The APVMA notifies the public of the results of the evaluation and invites public comment on the registration proposal before making its decision. It also invites members of the public to participate in its programs such as reporting adverse chemical experiences through the Adverse Experience Reporting Program (AERP) and contributing to chemical reviews.

State and Territory Governments are responsible for controlling the use of pesticides beyond the point of retail sale. Each state or Territory has a regulatory body or bodies responsible for pesticide
use, for example in Victoria it is the Department of Environment, Land, Water and Planning, and in Western Australia, the Department of Agriculture and Food and, WA Health. All have similar legislation and codes of practice to ensure safe and effective application of registered chemicals.

For the states concerning the National Derogation applications, the relevant regulations are:

Queensland - Agricultural Chemicals Distribution Control Act 1966

Each of these acts or regulations interacts with other acts, for example, in Queensland:

- Agricultural Chemicals Distribution Control Act 1996
- Agricultural Chemicals Distribution Control Regulation 1998
- Chemical Usage (Agricultural and Veterinary) Control Act 1988
- Chemical Usage (Agricultural and Veterinary) Control Regulation 1999
- Work Health and Safety Act 2011

While these differ from state to state, since 2008, each state and Territory has agreed to a common framework for the control of use of agricultural and veterinary chemicals. As a result, the control of use is now becoming increasingly consistent across States and Territory’s (COAG, 2008).

The end result for each state is that pesticides are:
- transported and stored safely
- used only by persons that are appropriately trained and where deemed necessary, licensed
- used in a way that ensures the safety of applicators and the public
- used in a way that ensures the safety of the environment
- used in an accountable manner through detailed recording of all application areas, pesticide application details and environmental conditions at the time of application

Like the APVMA, states and territories take a risk management approach to pesticides and frequently there are limitations on which states or territories pesticides may be used and how they may be used in those states. For example, Grazon Extra (one of the most common products containing picloram) for given use situations has nominated states in which that use may occur.

Forestry Application

All certified companies have well documented policies and operational procedures, best practice manuals or similar for the use and handling of chemicals that are in alignment with State and Federal Government requirements. These include Integrated Pest Management Strategies, detailed Site operation plans and Site Specific Silviculture plans.

Staff are trained to a high level and only qualified staff or contractors, are used to carry out spraying operations. All label and MSDS instructions are adhered to. Site-specific spray plans are developed that address any known neighbour and environmental sensitivities. Spray plans include details of untreated buffer zones, which are used to protect sensitive areas within, or adjacent to, the plantation. Weather conditions are carefully monitored throughout each operation. Operations will be postponed, or cancelled where weather conditions are not suitable. Follow-up monitoring of the impacts of the operation on weed populations and the crop where relevant is carried out.

Picloram specific controls

Picloram is listed by FSC as a possible endocrine disrupting chemical. Given this identified risk then the principle risk controls that are critical for the pesticide are exposure to humans. This exposure
can occur through exposure to the applicator or via spray drift from application operations. The risk of exposure is generally dealt with by using appropriate personal protective equipment when handling and mixing the concentrate. Elbow length gloves are a standard and are specified on the relevant Material Safety Data Sheets. In addition, full cotton overalls are required and a hat and either goggles or preferably, a face shield. Once mixed, industry best practice dictates that operators are safely positioned in sealed vehicle cabins with an appropriate chemical filter to eliminate any possible intrusion of that environment.

In addition to the buffers already in place to mitigate spray drift, Forest Manager’s are participating in industry wide research project to examine the real spray drift risks based on actual spray set ups and application scenarios which will further refine downwind spray buffers and lead to an improvement in confidence of the buffers used. This project is supported by the APIPRC (Australian Plantation Industry Pesticide Research Consortium) which is jointly funded by Industry and the FWPA (Forest & Wood Products Association). The research project uses actual spray set ups and application scenarios to derive the droplet size distribution generated by a spray operation. This droplet size distribution can then be used in the validated model, Agdisp, to determine at what downwind distance the level of copper no longer poses risk. This process has now been recognised by the APVMA and will in future contribute to the conditions on registered labels. While Agdisp is not currently capable of accounting for interception of drift by tree canopies (this will lead to forest managers over estimating the buffer required ensuring there is no risk of exposure), the NWPPA (National Working Party on Pesticide Application) is working with the APVMA to examine this area.

PROGRAM TO IDENTIFY ALTERNATIVES TO A ‘HIGHLY HAZARDOUS’ PESTICIDE INCLUDING PREVENTATIVE SILVICULTURAL MEASURES.

a) (Fill in only if you represent a large-scale MU)
Please describe the research program (individually or in collaboration with other research agencies/institutions or commercial enterprises) and/or field trials of alternative non-chemical or less hazardous methods of pest management that have been planned for the requested derogation period, including devoted resources and expected timelines.

b) (Fill in only if you represent a medium-scale MU)
Please describe how you will support and/or be involved in a research program from research agencies/institutions (e.g. universities) or commercial enterprises in the requested derogation period, including devoted resources and expected timelines.

c) (Fill in only if you represent a small-scale MU)
Please describe the program to exchange information related to pesticides use with other forest managers, to contact research institutions and/or search in alternative databases, that will be implemented in the requested derogation period.

d) (Fill in only if you are applying for the renewal of a derogation)
Please describe the programs that have been implemented to investigate, research, identify and test alternatives to the requested ‘highly hazardous’ pesticide, and the results.

Describe the programs that are in place to identify alternatives, including a timetable as well as research partners and targets:

Response

Regrettably the successful model of CRC’s (cooperative research centre’s) for various research topics, such as forestry or weed control, has been largely abandoned by the Australian federal government. The CRC’s saw the best minds from industry, universities, CSIRO and international experts collaborate to provide some remarkable research outcomes. As a result of their demise, research into weed control is now spread across a large number of organisations such as state government agencies, for example, PIRSA in South Australia), Research and Development
Corporation (eg, Grains Research and Development Corporation) and other interest groups. The principal model for research into weed control in plantation forestry currently is the APIPRC (Australian Plantation Industry Pesticide Research Consortium). This consortium is funded by forest managers direct cash input and in-kind contributions for which the cash component is matched by FWPA (Forest and Wood Products Association), whose funds are sourced from an industry level on sales. The APIPRC was formed in 2010 to replace the work of Dr. Barry Tomkins who had previously coordinated and conducted research principally into establishment weed control. The scope of the APIPRC was broadened to include pesticides more generally. The APIPRC has an annual budget of up to $200,000 annually for the past 5 years and has conducted a range of trials each year in Australia testing various herbicides and combinations, including herbicides made available by chemical manufacturers. Despite these substantive efforts, no commercially viable non-herbicide based management options have yet been identified that could replace the judicious use of picloram.

The APIPRC is well placed to develop new methodologies and pesticides for weed control, including potential replacements for picloram. The membership of the consortium includes forest managers from across Australia, including several state based forest managers with direct access to innovations and developments from other state government entities. The membership also includes arguably the pesticide suppliers most active in research into new pesticides and in particular, innovations that reduce drift and exposure. The consortium also tenders out its research project to a broad base of research suppliers further extending the reach and knowledge base of the group.

STAKEHOLDER CONSULTATION

a) Description of the nature of the information provided and consultation undertaken with potentially affected groups and local communities (e.g. neighbors on directly adjoining land) who use managed forests for various purposes (as a source of groundwater, for hunting, fishing or gathering medicinal or edible plants) and those stakeholders with the more general interest regarding the use of pesticides.

b) Description of the consultation mechanism (i.e. public notices in local newspapers or on local radio stations, letters sent to potentially affected persons, meetings, field observations etc.) used to inform, consult and receive significant feedback from the majority of the potentially affected persons.

c) Evidence of balanced stakeholder consultation with:
- Potentially (directly or indirectly) affected persons or groups of individuals
- Local/regional environmental organizations (non-governmental organizations)
- Local/regional government (environmental authorities)
- Representatives of the local community (e.g. contacted at community meetings)
- Representatives of the forest industry

d) A summary of the comments received and any responses presented for each stakeholders category. Explanations should be given of how stakeholder concerns were addressed. Where necessary, the original stakeholder comments may be requested.

Response