

## Risk Identification and Treatment

### Personnel being infected with zoonotic AI during destruction of birds infected with zoonotic Avian Influenza

This RA assumes that zoonotic AI has occurred and response actions are necessary for control of the disease. The RA does not address the activities that are in place for reducing the likelihood of the virus occurring in NSW i.e. the likelihood of zoonotic AI occurring is being minimised outside the controls described for this RA.

<b>Area / property (where relevant):</b>			
<b>Prepared by</b>	Kevin Cooper, Leader APFHEPR	<b>Date completed</b>	4 January 2007
<b>Authorised by</b>	Leader APFHEPR	<b>Date authorised</b>	8 October 2008

<p><b>1 Specific Risk</b></p> <p>Personnel (and others on farm and in community) becoming infected with zoonotic AI virus during destruction of AI infected birds for disease control purposes</p>	<p><b>2 Source(s) of Risk</b></p> <ul style="list-style-type: none"> <li>▪ Animal disease - Zoonotic AI</li> </ul> <p><b>3 Area(s) of Impact</b></p> <ul style="list-style-type: none"> <li>• Livestock health</li> <li>• Human health</li> <li>• Economic</li> <li>• Commercial</li> <li>• Environmental</li> <li>• Organisational capability</li> <li>• Political</li> </ul> <p>Reputation and image</p>	<p><b>4 Current Risk Treatment</b></p> <p>The current procedure for destruction on infected commercial poultry involves the capture by hand of each bird and the placement of the captured birds in a container for euthanizing using CO2 gas.</p> <p>The procedure requires a significant number of people (&gt;50) and resources such as waste skips for destruction of a standard 4 shed farm. Time taken is usually in excess of 4-6 hrs.</p> <ul style="list-style-type: none"> <li>• <b>Administrative</b></li> </ul> <p>A range of actions are in place to reduce the likelihood of personnel being infected these include:</p> <ul style="list-style-type: none"> <li>• Induction at different levels including to the operation and when entering an infected site;</li> <li>• Training in the use of equipment associated with the destruction methodologies</li> <li>• Policies that support adoption of reduced risk approach e.g. policy that outlines requirements for those working in an AI control operation and procedures that describe the methodologies for the destruction of infected birds</li> <li>• Trained personnel – 1<sup>st</sup> Response Team are trained in the appropriate procedures.</li> <li>• Health monitoring</li> <li>• Operational briefing and debriefing</li> <li>• Licensing of CO2 for destruction of birds</li> <li>• Standard OHS systems such as             <ul style="list-style-type: none"> <li>○ ICS systems including Safety Advisor role</li> <li>○ SOPs and supporting procedures</li> <li>○ QA approach</li> </ul> </li> <li>• <b>PPE</b></li> <li>• Specialized PPE is stockpiled and available for use during destruction of AI infected birds</li> <li>• Personnel are trained in the use of specialized PPE</li> <li>• Anti-viral stockpile is in place for support of personnel working in high risk areas.</li> </ul>
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5 Current Risk Profile			6 Proposed Risk Treatment	7 Risk Profile After Treatment			8 Comment**
5a L Likelihood  C	5b C Consequence  4	5c Risk Rating  H		7aL  E	7bC  3	7cRisk Rating  L	
			<p>The approach is to adopt an alternative procedure that collectively uses controls at different levels to reduce the likelihood of personnel (and others on farm and in the affected community) being infected.</p> <ul style="list-style-type: none"> <li> <b>Elimination</b>                      Options to partially or completely achieve this level of control may include:                     <ul style="list-style-type: none"> <li>Lock up the farm and walk away. This is not acceptable as the disease is likely to spread and in so doing expose more people and birds to the disease. There are also potential animal welfare implications. There is the opportunity for the virus to increase in quantity and in so doing may develop into a more lethal strain.</li> <li>Minimize personnel number that are involved in the operation i.e. eliminate all personnel from the site who do not need to be on site. The in shed mass destruction approach only requires a small number (&lt;10) people to be on site.</li> </ul> </li> <li> <b>Isolation</b> <ul style="list-style-type: none"> <li>For personnel who must be on site, increase time and space between those personnel and their exposure to Zoonotic AI virus i.e. remove the need for personnel to have direct contact with infected birds (high source of virus) and also other sources of infected materials such as litter.  Personnel are to have no direct contact with infected birds and minimal contact with other infected materials.  Personnel are only to be on site for the time necessary to complete the procedure. The in shed destruction reduces the amount of time personnel need to be on site and in so doing reduces their length of time exposed to the infected material/birds.</li> </ul> </li> <li> <b>Substitution</b> <ul style="list-style-type: none"> <li>Replace the existing method where each bird in a shed is caught by hand and then placed in a container for destruction with gas with the method where birds are killed in situ on mass with bulk CO2 gas.</li> </ul> </li> <li> <b>Engineering</b> <ul style="list-style-type: none"> <li>Bulk delivery of CO2 gas to site and ability to convert it to gas through vaporizer for rapid delivery into shed in short time permits destruction to meet animal welfare requirements and disease control requirements.</li> </ul> </li> </ul>				<p>Other risks reduced by application of the above treatments</p> <ul style="list-style-type: none"> <li>Reduced likelihood of disease spreading – early and quick control on site, fewer personnel on site means reduced likelihood of spread from the site and other sites.</li> <li>Reduced likelihood of those in community affected by the disease being infected with the virus</li> <li>Reduced impact on community infrastructure through reduced scale of operation</li> <li>Reduced operational costs through on site efficiencies and reduced size of overall area infected</li> <li>Reduced impact on the environment – no deep burial and no incineration because in shed composting is made possible by mass in shed destruction</li> <li>Reduced overall costs because size of operation is minimised and less effort required in operation.</li> <li>Reduced number of personnel working on site means there is a reduced number of personnel who may need support for other consequences of the activity e.g. management of traumatic effects of being involved with destruction</li> <li>Reduced adverse impact on the affected industries and also the government.</li> </ul> <p>NOTE: the in shed mass destruction method does present some additional operational risks that must be addressed including exposure to lethal levels of CO2 gas.</p>

			<ul style="list-style-type: none"> <li>• <b>Administrative</b> <ul style="list-style-type: none"> <li>▪ Only those people who are involved are trained for their role and also completion of the tasks need to be involved in the task.</li> <li>▪ All current controls still apply</li> </ul> </li> <li>• <b>PPE</b> <ul style="list-style-type: none"> <li>• The change in methodology will necessitate the continued use of the current PPE including the antivirals, and in additional new items such as personal gas alarms for the new approach.</li> <li>• All current controls still apply</li> </ul> </li> </ul>				
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**\*\*Mandatory requirement** if assessed level of risk rating is X (extreme) or H (high)

