Senate Standing Committee on Environment and Communications
Legislation Committee
Answers to questions on notice
Sustainability, Environment, Water, Population and Communities portfolio
Supplementary Budget Estimates, October 2012

Program: Division or Agency:	3.1: AAD	**Question No:**	075
Topic:	Antarctica: Science, Policy and Presence		
Proof Hansard Page and Date	Written		
or Written Question:			

Senator Singh asked:

1. Can you explain the success (or not) of the trial around the UV sterilisation of effluent?

2. How much does AAD currently spend on such waste disposal? Where does it currently end up?

Answer:

1. The trial of UV sterilisation of effluent was carried out at Casey Station and was found to be unsuccessful. The turbidity (turbidity is a measure of the degree to which the water loses its transparency due to the presence of suspended particulates) of the waste water being discharged was too high. The UV light could not effectively kill all bacteria because the UV light could not penetrate effectively past the particulates. The ability to reduce the turbidity of the discharge stream (to make UV sterilisation effective) is limited by the design of the Waste Water Treatment Plants in operation on Australian Antarctic Stations. These plants are secondary treatment plants which do meet the requirements of the *Antarctic Treaty (Environment Protection) Act 1980* (ATEP Act). It is planned over the next five years to replace these plants with Tertiary treatment plants where UV treatment will be installed and will be effective due to the ability of these plants to achieve a low turbidity of discharge.

2. Waste Water Treatment Plants (WWTP) on Antarctic Stations process all waste water streams and separates solids from liquid. The solids are returned to Australia as part of normal non-burnable and recycled waste streams which are returned as cargo on the *Aurora Australis*. The waste water stream is discharged to the ocean where it is diluted and dispersed. This disposal method meets the ATEP Act. The indicative annual cost of treating this type of waste is $70,000 per annum or approximately $0.02 per litre of effluent.