

**EDUCATION, SCIENCE AND TRAINING**

**SENATE LEGISLATION COMMITTEE – QUESTIONS ON NOTICE  
2005-2006 BUDGET ESTIMATES HEARING**

**Outcome:** CSIRO  
**Output Group:** CSIRO

**DEST Question No. E173\_06**

Senator Carr asked on 1 June 2005, EWRE Hansard pages 66 and 67.

**Question:**

**Senator Carr:** *Re Southern Surveyor cruise 2004-05, Weipa to Darwin from 21 March to 13 April this year. contracted to Geoscience Australia ...*

(a) could you confirm that these are occupational health and safety issues on the vessel that created intolerable working conditions and that the vessel had no equipment to monitor the problem, let alone deal with it.

(b) It was also put to me that an ultimatum has been put to CSIRO that the problem is either fixed or there will be a halt put to the next cruise. Can you confirm any of this?

**Dr Garrett:** I will have to take that on notice.

.....

**Senator Carr:** Further,

(c) I would like to know what arrangements were made for the storage of garbage on the vessel, because again it was put to me that no incinerator was provided in the refurbishments and

(d) that there were major health problems with garbage storage on the vessel.

(e) While it said, of course, that the age of this vessel does not require certain facilities to be provided for a little while yet – until 2008 – there were recently quite major refurbishments undertaken on the vessel, but these rudimentary arrangements were not made. I would be interested to know why it is that those measures were not taken.

**Dr Garrett:** We will report back to you.

**Senator Carr:** Thank you.

(f) Geoscience Australia has three cruises, doesn't it – there have been three cruises for the vessel?

**Dr Garrett:** I will have to confirm that. I do not know.

**Answer:**

CSIRO has provided the following response.

*Southern Surveyor and Geoscience Australia*

(a) Yes. There were smells on the vessel during the voyage from Weipa to Darwin from 21 March to 13 April this year, and they were investigated as an occupational health and safety issue.

Dr Peter Harris, Chief Scientist on the voyage, stated in an email to the Marine National Facility Director, Fred Stein on 2 April; "I am very concerned that some of the gases may be poisonous (i.e. H<sub>2</sub>S) and this matter is clearly an OH&S issue." The *Southern Surveyor's* Master, Chief Engineer and Technical Manager were aware of Dr. Harris' concerns. They have advised that, in their professional opinion, at no time were hazardous concentrations of noxious gases present.

In accordance with conventional marine practice and AMSA requirements, the vessel was carrying gas measuring equipment for:

- Flammable Hydrocarbon mixtures
- Oxygen concentration
- Carbon Dioxide concentration

Ordinary maritime practice and AMSA requirements do not require the vessel to carry equipment to measure the concentrations of H<sub>2</sub>S.

When CSIRO management became aware that there was a view that concentrations of H<sub>2</sub>S may be present at a significant fraction of the gas' Threshold Limit Value(TLV) CSIRO delivered suitable supplementary gas detection and measuring equipment to the vessel.

Repeated measurements were taken under conditions reported to be similar to those of the worst occurrences and concentrations recorded at up to 10% (2ppm) of H<sub>2</sub>S's TLV(15ppm). This level is not considered to be harmful to human health.

In light of the possibility for a reoccurrence of the smell, both hydrogen sulphide and methane sensors were added to the vessels gas detectors although it is understood that:

- the cause of these occurrences has been identified and addressed, and
- the concentrations present, although annoying, were not great enough to cause harm.

(b) Dr Peter Harris, Chief Scientist on Voyage SS04/2005 and Richard Cooper, Business Manager, both of Geoscience Australia, did request that remedial action be taken to address the cause of the smells before the next voyage. CSIRO outlined the action it had planned in response to the smells experienced on voyage SS04/2005. These actions were undertaken and the next voyage departed on schedule.

(c) An environmental audit conducted by an external party, at the time of the vessel's conversion, considered incineration and other options. Recommendations from the audit based on the principles of reduction and recycling were adopted and implemented. The vessel's waste disposal strategies are outlined below and followed by the crew:

- Dry waste: reduced by eliminating bottles and cans. A drink mixing machine dispensing into soft cups was fitted. A garbage compactor was fitted in the vessel's forward hold where dry garbage is separated, compacted and stored. Compacted dry waste is passed to shore-based contractors on arrival in port.
- Wet waste: where acceptable under MARPOL, wet waste is macerated and disposed of into the water column in accordance with conventional maritime practice. Where not acceptable, it is bagged and frozen in scientific freezers (to prevent odours). If scientific freezer space is not available it is bagged and stored in dedicated bins on the vessel's external decks. Any wet waste remaining aboard on arrival in port is handled by shore-based contractors.

(d) CSIRO has not been advised of any health problems arising from these garbage handling practices.

(e) There are a number of arrangements under Annex IV to the MARPOL Convention which are not required to be provided until 2008.

(f) In the 2004/2005 financial year Geoscience Australia has been a sponsor organisation for three voyages.

SS02/2005	25/01/05 -20/02/05	Marine National Facility Voyage	Dr. N. Exon
SS04/2005	22/03/05-13/04/05	Cooperative Research Charter	Dr. P. Harris
SS05/2005	29/04/05-28/05/05	Cooperative Research Charter (Co-sponsored by the National Oceans Office)	Dr. G. Logan