

Class B Non Serious Harm Accident Report

# **San Rakaia**

## **Carbon Monoxide**

### **Poisoning**

Onehunga, on 10 January 2005

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**REPORT NO: 96 345**

***SAN RAKAIA* – CARBON MONOXIDE POISONING**





**Name of Vessel:** *San Rakaia*

**Vessel Type:** Fishing Vessel

**Date of Injury:** 10 January 2005

**Time of Injury:** 1400

**Employer:** Sanford Ltd and Taylors Labourers Ltd

## NARRATIVE

On 10 January 2005, the fishing vessel *San Rakaia* was berthed at Onehunga. At approximately 1430 hours New Zealand Daylight Time (NZDT), employees of the unloading contractors loaded a hired petrol driven pump into *San Rakaia*'s lower fish hold in order to pump out excess water after completion of unloading. Prior to this, the contractor's supervisor had gone ashore on business.

Three of the vessel's crew were working in the forward part of the lower hold at the time. They were refitting the fish boards under the supervision of the Mate. They were unaware that the pump had been lowered into the hold.

There were five unloading contractors in the hold engaged in cleaning duties in the after part of the hold.

At approximately 1500 hours, one of the deck hands felt unwell and told the other crew to get out of the hold. The pump was stopped at approximately this time. The contractors' supervisor returned to the vessel at about the same time and instructed her employees to leave the hold.

At approximately 1600 hours, one of the vessel's crew entered the lower hold wearing breathing apparatus to check that the space had been completely vacated. Nobody was found.

At approximately 1700 hours, one of the vessel's crewmembers again entered the fish hold to rig extraction fans. The Owners sent the extraction fans from their maintenance department. At around this time the vessel's Engineer went down to the fish hold. He was not wearing breathing apparatus and whilst affected by carbon monoxide poisoning was able to get out of the space without assistance.

The contractors left the wharf at approximately 1700 hours after it was deemed too dangerous to continue operations that evening. The vessel's crew also later left the vessel for the night.

At approximately 1045 hours on 11 January, gas detection equipment that had been hired by the owners was used in the hold. No gas was detected and the space was deemed to be safe for crew once again.

The pump was manufactured by Robin Pumps and was of a model type PTX-201. The contractors had hired the pump from the Henderson branch of Hirepool Ltd.

The Skipper was ashore during the incident.



**FIGURE 1: PUMP USED IN INCIDENT.**

## INJURY

Five of the cleaning contractor's staff and three of the vessels crew were working in the lower fish hold at the time of the incident. They all suffered carbon monoxide poisoning to some degree. Upon leaving the hold, they disembarked the vessel and sat on the wharf in order to breath fresh air. The contactors supervisor obtained some Nurofen tablets to assist some of her workers who were complaining of headaches. The main symptoms were dizziness and muscular weakness.

After approximately 30 minutes in the fresh air, the symptoms dissipated.

Two of *San Rakaia's* crew showed symptoms that were severe enough for the Skipper to send them to hospital. They were still feeling the effects of the poisoning three hours after the event. The two crewmembers were given blood tests and after being given medical oxygen to breath felt much better.

## LEGISLATION

The Health and Safety in Employment Act 1992 states:

- Section 6 Employers to ensure safety of employees--*  
*Every employer shall take all practicable steps to ensure the safety of employees while at work, and in particular shall take all practicable steps to—*
- (a) Provide and maintain for employees a safe working environment;*  
*and*
  - (b) Provide and maintain for employees while they are at work facilities for their safety and health; and*
  - (c) Ensure that plant used by any employee at work is so arranged, designed, made, and maintained that it is safe for the employee to use; and*
  - (d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—*
    - (i) In their place of work; or*
    - (ii) Near their place of work and under the employer's control;*  
*and*
  - (e) Develop procedures for dealing with emergencies that may arise while employees are at work.*

- Section 7 Identification of hazards—*
- (1) *Every employer shall ensure that there are in place effective methods for--*
- (a) Systematically identifying existing hazards to employees at work; and*
  - (b) Systematically identifying (if possible before, and otherwise as, they arise) new hazards to employees at work; and*
  - (c) Regularly assessing each hazard identified, and determining whether or not it is a significant hazard.*
- (2) *Where there occurs any accident or harm in respect of which an employer is required by section 25(1) of this Act to record particulars, the employer shall take all practicable steps to ensure that the occurrence is so investigated as to determine whether it was caused by or arose from a significant hazard.*

- Section 13 Training and supervision—*
- Every employer shall take all practicable steps to ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work—*
- (a) Either-*
    - (i) Has; or*
    - (ii) Is so supervised, by a person who has-- such knowledge and experience of similar places, and work, plant, or substances of that kind, as to ensure that the employee's doing the work, using the plant, or dealing with the substance, is not likely to cause harm to the employee or other people; and*
  - (c) Is adequately trained in the safe use of all plant, objects, substances, and protective clothing and equipment that the employee is or may be required to use or handle.*

## **HAZARD IDENTIFICATION**

*San Rakaia* has a hazard register onboard. It is kept in the wheelhouse. The possibility that a petrol driven pump may be used in the fish hold had not been identified as a possible hazard. As it was a 'one off' incident involving a shore pump, the Owners and Skipper of the vessel could not be expected to have identified this hazard.

The contracting company do not have a hazard register. A foreman gives all of their new employees training when first employed. This training is all conducted 'on the job'.



## **ACTION TAKEN**

Since the incident, the crew of *San Rakaia* have been given training relating to enclosed spaces.

The contractors' employer has instructed her employees about the dangers associated with carbon monoxide poisoning and has issued them with verbal warnings.

The contractors no longer have the cleaning contract with Sanfords.

## **RECOMMENDATIONS**

1. It is recommended that the use of a petrol drive pump in an enclosed space be included in the ship's hazard register and in the hazard register of all other vessels operated by Sanford.
2. It is recommended that a letter be written by the MSA to the Contractors, reminding them of their responsibilities under sections 6, 7 and 13 of the HSEA 1992 and of the need to have a documented hazard register and to erect signage on their portable pumps that they are not to be used in an enclosed space without proper and sufficient ventilation being present.
3. That copies of this report be passed to all Safe Ship Management Companies with a recommendation that when auditing vessels they ensure that a proper hazard register is being maintained and has been brought to the attention of all crew.