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Mr Paul Neville MP
Chair of House of Representatives Standing
Committee on Communications, Transport and the Arts
Parliament of Australia
Parliament House
CANBERRA ACT 2600

Dear Mr Neville

INQUIRY INTO MANAGING FATIGUE IN TRANSPORT

On 3 May 1999, you wrote to the Hon Norman Moore MLC (Minister for Mines, Tourism, Sport & Recreation) informing him of the inquiry into managing fatigue in transport to be conducted by the House of Representatives Standing Committee on Communications, Transport and the Arts.

In his reply, the Hon Minister advised that the Department of Minerals and Energy Western Australia would provide a submission to the inquiry. In accordance with this advice, a submission is attached on the issue of managing fatigue in the mining industry in this State.

If you have enquiries concerning the attached submission, please contact Mr Jim Torlach on (08) 9222 3280.

Yours sincerely

L C Ranford
DIRECTOR GENERAL

30 June 1999

MMS569SB/L

SUBMISSION BY

DEPARTMENT OF MINERALS AND ENERGY
WESTERN AUSTRALIA

TO

PARLIAMENT OF AUSTRALIA
HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON
COMMUNICATIONS, TRANSPORT AND THE ARTS

INQUIRY INTO MANAGING FATIGUE IN TRANSPORT

JUNE 1999

A SUBMISSION BY THE DEPARTMENT OF MINERALS AND ENERGY WESTERN AUSTRALIA

MANAGING FATIGUE IN TRANSPORT

INTRODUCTION

The Department of Minerals and Energy is the State Government agency in Western Australia responsible for administration of Acts regulating safety and health in the mining and petroleum industry.

The Department has long recognised that fatigue is an occupational safety and health issue for the industry, and the potential for adverse consequences has increased with a general move across much of the industry to long distance commute (LDC) operations, and to compressed work schedules (CWS), both of which usually involve working extended shifts.

FATIGUE ISSUES IN THE MINING INDUSTRY

In the mining industry, (within which in Western Australia is included by legislation, downstream processing and refining), most production operations are carried out on a continuous basis, which requires shiftwork.

Except for the transport of iron ore on privately owned and operated rail systems in the Pilbara, mining products are transported from and between mining operation sites by road and commercial rail operators.

WorkSafe Western Australia regulates occupational safety and health in these sectors.

At the actual mining operations, a major component of the mining process involves transporting material, largely by rubber tyred vehicles on road, both on the surface and underground.

With the continuous mining operations requiring the working of extended shifts, and LDC requiring compressed work schedules, there is a potential for driver and equipment operator fatigue which is comparable to that long haul road transport operations.

A mitigating factor, which may be arguable, is that on a minesite there is the capacity to exercise a credible degree of monitoring and supervision, which is not possible in the case of long haul road transport operations.

Over the past five to six years the Department has been active in directing attention to the issue of shiftwork and occupational health in the industry, principally through the mechanisms afforded by the tripartite Mines Occupational Safety and Health Advisory Board (MOSHAB). This is a statutory body set up to advise the Minister for Mines on safety and health issues, and essentially parallels the function of the WorkSafe WA Commission for the mining industry in this State.

Industry workshops on the issue were conducted jointly by the Chamber of Minerals and Energy and the Department, in 1994 and 1997. Guideline documents were produced by the Chamber from these workshops titled

> *"Shiftwork and Occupational Health and Safety in the Western Australian Mining Industry – Guidelines for Workers and Management"*

Some leading Australian researchers were invited to and involved in these workshops. The second guideline updates the 1994 edition. A copy is attached for reference.

The guideline traverses the broad spectrum of occupational safety and health issues related to shiftwork, and recommends a range of strategies to manage the associated risks.

The guideline notes that employee fatigue may derive not only from work factors but also from those impacting on employees away from work, and there can be a compounding effect of these on the employee while at work. This is recognised as an issue to be managed.

There is sometimes confusion in the use of the term fatigue. It is normally used to connote tiredness due to heavy or extended physical exertion.

It is also commonly construed to cover the condition of sleep deprivation, which leads to a person developing a "sleep debt".

Sleep debt deriving from sleep deprivation can lead to the affected person experiencing micro-sleeps in the course of work, which may have disastrous consequences, particularly when driving. (*Refer "Our Sleepy Society" in the Encyclopedia Britannica Yearbook of Science and the Future 1998*).

MANAGING THE RISKS OF FATIGUE ASSOCIATED WITH SHIFTWORK

There is a considerable number of operational and organisational aspects upon which shift cycles, work rosters, etc. may impact adversely in relation to safety in operations, but of overwhelming importance is the problem of sleep deprivation; (fatigue).

A substantial amount of research has been undertaken in Australia, and globally, on the physiological and mental effects of shiftwork on people.

Although no definitive standards on fatigue are available, the major factor identified is the effects of working a sequence of night shifts.

The decrement to performance of an individual from sequences of night shifts can be equated to equivalent levels of blood alcohol concentration.

For many years industry generally has regarded the issue of shiftwork rosters as an industrial relations or human resources issue.

The issue is now being recognised as one of a range of operational hazards, and the associated spectrum of risks has to be managed.

The MOSHAB has undertaken the development of a Code of Practice dealing with the risks associated with shiftwork and rosters.

The Code is being drafted generally on the basis of the industry guideline referenced earlier, but places more specific emphasis on risk management. A Code has more leverage than a Guideline, and is considered to be more effective in focusing and directing effort on reducing the spectrum of risk.

Codes of Practice under the Mines Safety and Inspection Act 1994, have the same status as those under the Occupational Safety and Health Act 1984, administered by WorkSafe WA.

With the data available it has not been possible to establish a nexus between shiftwork and accident causation.

Reports are regularly received of persons dozing off while driving trucks on minesites, particularly where extended shifts and compressed work schedules are in use on LDC operations.

However these are also experienced where shorter shifts are worked on a roster involving a week of night shifts or afternoon shifts in sequence.

What is established and agreed upon is that a spectrum of risks exists, and needs to be managed.

The Department does not believe that the solution can be found in introducing legislation.

Constraints on hours and days of work which existed in earlier legislation were removed as they proved unworkable. These constraints existed mainly in relation to underground operations.

Adoption of the European Union regulatory constraints on shiftwork is reported by the Health and Safety Executive in the UK as being unenforceable with existing resources, although the regulations were introduced by the HSE. (Refer attached extract from the UK Safety and Health Practitioner – September 1998).

RECOMMENDATION

The most effective strategy is considered to be a continuing process of education and information, which includes making use of published material, such as the policy/guideline document released by the Centre for Sleep Research in South Australia, supported by appropriate Codes of Practice developed in relevant industry sectors by the stakeholders.

Given the vast geographical spread of Australia, and the reliance on interstate and intrastate long haul transport, development and adoption of a national road transport Code of Practice appears to be the most practicable approach.

28 June 1999
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