

CABINET MINUTE

BRISBANE, 16/7/1990

DECISION NO.

00544

SUBJECT: Information Paper - Coal Mine Explosion Research Project.

(Submission No. 00520)

50 Copies Received at 10-00 a.m. 10/7/1990 VAUGHAN

Copies Made

CIRCULATION DETAILS

| | | | | | |
|----|---------------|----|--------------------------|---|---|
| 1 | MR GOSS | 21 | Premier's | B | Copy of relevant Submission attached 43 |
| 2 | MR BURNS | 22 | Housing & LG | | |
| 3 | MR MACKENROTH | 23 | Police & Emerg. Services | | |
| 4 | MR DE LACY | 24 | Treasury | B | Copy of relevant Submission attached 44 |
| 5 | MR GIBBS | 25 | Tourism, Sport & Racing | | |
| 6 | MR HAMILL | 26 | Transport | | |
| 7 | MR WARBURTON | 27 | DEVET & IA | | |
| 8 | MR VAUGHAN | 28 | Resource Indust | S | Copy of relevant Submission attached 45 |
| 9 | MR CASEY | 29 | Primary Indust | | |
| 10 | MR McELLIGOTT | 30 | Health | | |
| 11 | MR BRADDY | 31 | Education | | |
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| 20 | Master File | 40 | | | |



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10th July, 1990

Mr S. Tait
Secretary to Cabinet
Department of The Premier,
Economic and Trade Development
Executive Building
100 George Street
BRISBANE QLD 4000

Dear Mr Tait,

Enclosed are 50 copies of an information paper entitled Coal Mine Explosion Research Project for the information of Ministers.

A total of 53 copies of the Submission have been produced. I have arranged distribution of the Submission as follows -

| | |
|--------------------|---|
| Copies Nos. 1 - 50 | - Cabinet Secretariat |
| Copy No. 51 | - Honourable the Minister |
| Copy No. 52 | - Director-General |
| Copy No. 53 | - Cabinet Legislation and Liaison Officer |

If you require further information please contact me on 237 1525.

Yours sincerely,

(T. NOYCE)
Cabinet Legislation and
Liaison Officer



C O N F I D E N T I A L
C A B I N E T M I N U T E

Brisbane, 16 July 1990

Decision No. 00544

Submission No. 00520


TITLE: Coal Mine Explosion Research
Project.

CABINET decided:-

1. That the contents of the Information Paper, "Coal Mine Explosion Research Project", be noted.
2. That a suitable media statement be made by the Honourable Minister for Resource Industries in due course.

CIRCULATION: Implementation Responsibility
Department of Resource Industries and copy to
Minister.
Departmental Records
Department of the Premier, Economic and Trade
Development.
Treasury Department.
Perusal and Return
All other Ministers and Chief Executives.

Certified True Copy


Secretary of Cabinet.



SECURITY CLASSIFICATION "C"FOR INFORMATION

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TITLE

Coal Mine Explosion Research Project

MINISTERIAL SPONSOR

Minister for Resource Industries

BACKGROUND

1. On 16th July, 1986 an explosion in the Moura No. 4 Underground mine in Central Queensland killed twelve men. Their bodies were recovered seven days later after an extensive and hazardous recovery operation.
2. The Warden's Inquiry held under the Coal Mining Act 1925-1981 formed the view that "the most likely source of ignition was the flame safety lamp". As a result, its use was largely discontinued in Queensland.
3. In September, 1988, Dr S. Leivesley and Dr K. Romaniuk reported that a detailed examination of the post mortem evidence and photographic records indicated an ignition source other than the flame safety lamp, and recommended further investigation.
4. In August, 1989, the previous Government allocated funds for the "Coal Mine Explosion Research Project" with the aim of identifying

"whether the results of forensic pathology, blast analysis, computer modelling and other factors can be used to assist in the establishment of location of ignition source and the development of a coal mine explosion."
5. A Project Team was set up under the chairmanship of the Director, Safety in Mines Testing and Research Station (SIMTARS) and including expert consultants in the fields of forensic pathology, blast analysis and computer modelling.

A Project Review Committee consisting of representatives of the Queensland Colliery Employees' Union (QCEU) and the Queensland Coal Association (QCA), in addition to the project team, was established at the outset to ensure that the hypotheses and findings of the investigation were subject to rigorous testing on practical grounds.

Overseas scientific experts were also consulted during the investigation.

RESULTS OF INVESTIGATION

6. The report of the Project Team was submitted to me on 18th June, 1990.

Each expert consultant's contribution has been included without change although other authors/project team members do not necessarily agree with all the material.

7. The important findings of this project are:-
- . no evidence was produced to challenge the findings of the Warden's Inquiry
 - . forensic pathology and computer modelling have potential for assisting in determining the origin and path of an explosion
 - . priority needs to be given to further research into preventive measures
 - . future investigations following an explosion should make use of a wider range of technical and scientific skills properly co-ordinated.
8. Part of one chapter of the report contains details of the physical and medical condition of the victims which could cause distress to their relatives and other persons in the industry. For the purposes of publishing the report, the sensitive details have been deleted and a note inserted to explain the reason.

9. Relatives of the miners who were killed in the Moura explosion have been briefed on a confidential basis by a group representing the QCEU, the QCA and my Department of Resource Industries.

FURTHER ACTION

10. It is my intention to release the public version of the report today, following which copies will be sent to those who contributed and to organisations both here and overseas which could benefit from the information.

A draft media release is attached.

The QCEU and the QCA have been briefed on the findings and supplied with a copy of the full report.

The Recommendations in the report, and action taken to implement them, are detailed in Annexure 'A'.

Ken Vaughan

KEN VAUGHAN
Minister for Resource Industries

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ANNEXURE 'A'

IMPLEMENTATION OF RECOMMENDATIONS IN THE REPORT

"COAL MINE EXPLOSION RESEARCH PROJECT"

Recommendation No.1 -

"Inertisation.

Research including study of existing overseas practice for rendering inert the atmosphere in the goaf.

Status:

A committee has been constituted under the chairmanship of the Chief Inspector of Coal Mines (CICM) with the first meeting scheduled for 17th July, 1990.

Responsibility:

CICM.

Recommendation No. 2 -

"Training.

Underground coal mine personnel to be made aware of risk of frictional ignition by machines impacting on rock where flammable gas is present.

Status:

Revised training/re-training programs for coal mine employees are currently in the hands of CICM for approval under the Coal Mining Act.

The requirement regarding frictional ignition will be incorporated in the approved programs.

Responsibility:

CICM/Mine Managers.

Recommendation No. 3 -

"Flame Suppression.

Research/investigations be undertaken to determine how underground coal getting equipment can be fitted with means of preventing ignition of flammable gas by machines.

Status:

SIMTARS' Principal Research Engineer will prepare research proposal after discussion with other research organisations (to avoid possible duplication).

Responsibility:

SIMTARS (at least initially).

Recommendation No. 4 - "Contraband.

Enforcement of regulations to eliminate use of materials underground in coal mines which are able to cause an ignition of flammable gas. Examples are prohibition of certain alloys and the use of hoses other than the fire-resistant, anti-static (FRAS) type.

Status: Adequate legislative power already in the Coal Mining Act. Stricter enforcement depends upon adequate staff (there are currently three vacancies in the coal mines inspectorate).

Responsibility: CICM (ongoing).

Recommendation No. 5 - "Structuring of Scientific Investigation of Mine Explosions.

The Chief Inspector of Coal Mines to be charged with the responsibility of conducting such investigation into any future incident in the manner described in Section 8.4 of this report. The investigation report should be made available to the Mining Warden for purposes of Inquiry into the cause."

Status: The CICM has been given the responsibility, and has already held discussions with relevant experts who might be involved in new investigation procedures. Preliminary enquiries have been made regarding appropriate training for specialist investigators (inspectors).

Responsibility: CICM.

Recommendation No. 6 - "Liaison with Other Government Departments.

....the Chief Inspector of Coal Mines should arrange close liaison with the Queensland Police Force and the Queensland Health Department as well as SIMTARS to ensure prompt action in the event of an underground mine explosion..."

Status: The CICM has taken initial steps to establish a special task force (see Recommendation No. 5).

Responsibility: CICM.

Recommendation No. 7 -

"Forensic Pathology.

Adequate facilities need to be made available in regional centres to obtain the maximum amount of information needed to investigate the cause of an explosion.

Alternatively, arrangements can be made for speedy transportation to Brisbane and the forensic work carried out there."

Status: To be considered by the special task force.

Responsibility: Task Force/CICM.

Recommendation No. 8 -

"Recording of Information in the Mine.

It is recommended that a photographic record be made of explosion-affected mine workings at the earliest opportunity.The use of a video camera complete with voice recording would provide the most effective means of gathering information."

Status: Task Force to consider and investigate availability of suitable equipment (flameproof and intrinsically safe).

Responsibility: Task Force/CICM.

Recommendation No. 9 -

"Further Research.

Priority should be given to prevention of mine explosions rather than sophisticated methods of post-explosion investigation."

Status: The statement is totally supported by this Department, the mines inspectorate and SIMTARS.

Research projects aimed at 'prevention' will continue to feature significantly in SIMTARS' plans. Whether or not those plans eventuate will depend in large measure, on the future role of SIMTARS which seems to be under a certain cloud at the moment.

Responsibility: A significant level of responsibility for ensuring that research is carried out in the future must rest with the Industry itself.

To the extent that it can influence the future direction, SIMTARS will certainly accept its share of the responsibility.

DRAFT MEDIA RELEASE

NEW EXPLOSION INVESTIGATION METHODS AND FURTHER UNDERGROUND MINE SAFETY MEASURES ARE BEING EXAMINED IN THE WAKE OF A GOVERNMENT COAL MINE EXPLOSION INVESTIGATION.

RESOURCE INDUSTRIES MINISTER KEN VAUGHAN ANNOUNCED TODAY THAT A TASK FORCE HEADED BY THE CHIEF INSPECTOR OF COAL MINES WAS BEING SET UP TO LOOK AT A NUMBER OF RECOMMENDATIONS OF THE INVESTIGATION TEAM.

MR VAUGHAN SAID THE RECOMMENDATIONS FOLLOW A SIX-MONTH RE-EXAMINATION OF THE MOURA UNDERGROUND COAL MINE EXPLOSION IN 1986.

THE 1987 MINING WARDEN'S INQUIRY INTO THE TRAGEDY FOUND THAT THE COMMONLY-USED FLAME SAFETY LAMP WAS THE MOST LIKELY SOURCE OF IGNITION FOR THE EXPLOSION, IN WHICH 12 MINERS DIED.

THE LATEST STUDY, ORDERED LAST YEAR, WAS INTENDED TO ESTABLISH IF OTHER SCIENCES --- INCLUDING FORENSIC PATHOLOGY, COMPUTER MODELLING AND BLAST ANALYSIS --- COULD HELP LOCATE THE SOURCE OF UNDERGROUND MINE EXPLOSIONS.

MR VAUGHAN SAID THE CHIEF FINDINGS OF THE STUDY WERE:

- * NO EVIDENCE WAS PRODUCED TO CHALLENGE THE FINDINGS OF THE MINING WARDEN'S INQUIRY;

- * FORENSIC PATHOLOGY AND COMPUTER MODELLING COULD BE USEFUL IN DETERMINING THE SOURCE OF ANY EXPLOSION;

- * FUTURE EXPLOSION INVESTIGATIONS SHOULD MAKE WIDER USE OF CO-ORDINATED TECHNICAL AND SCIENTIFIC SKILLS; AND

- * FURTHER RESEARCH IS NEEDED INTO PREVENTION.

"I HAVE MOVED QUICKLY TO IMPLEMENT THE RECOMMENDATIONS SINCE RECEIVING THEM JUST THREE WEEKS AGO," MR VAUGHAN SAID.

"THE SAFETY OF QUEENSLAND'S MINERS IS SOMETHING THAT CANNOT BE COMPROMISED.

"IF REASONABLE MEASURES CAN BE TAKEN TO PREVENT ANOTHER TRAGEDY LIKE MOURA, THOSE MEASURES WILL BE TAKEN."

IN LINE WITH THE RECOMMENDATIONS, A COMMITTEE, HEADED BY THE CHIEF INSPECTOR OF COAL MINES, HAS BEEN SET UP TO LOOK AT METHODS OF LESSENING THE EXPLOSION RISK FROM GASES WHICH COLLECT IN MINES.

THE GOVERNMENT'S SAFETY IN MINES TESTING AND RESEARCH STATION IS ALREADY EXAMINING EXISTING RESEARCH, AND CONSIDERING FURTHER WORK, ON MAKING UNDERGROUND COAL MINING EQUIPMENT SAFER.

MINERS AND MANAGEMENT ARE ALSO TO BE TRAINED IN THE RISKS OF MACHINERY CAUSING EXPLOSIONS.

THE MINISTER SAID THE CHIEF INSPECTOR OF COAL MINES WAS ALSO SETTING UP A TASKFORCE TO TACKLE MANY OF THE PROJECT TEAM'S OTHER RECOMMENDATIONS.

THE TASK FORCE WILL INVOLVE POLICE, HEALTH OFFICIALS AND SCIENTISTS AT THE STATE GOVERNMENT'S SAFETY IN MINES TESTING AND RESEARCH STATION (SIMTARS) TO ENSURE PROMPT, CO-ORDINATED ACTION AFTER UNDERGROUND MINE EXPLOSIONS.

THE TASK FORCE WILL ALSO LOOK AT TRAINING SPECIALIST INVESTIGATORS AND USING SAFE PHOTOGRAPHIC EQUIPMENT TO RECORD EVIDENCE AS SOON AS POSSIBLE AFTER EXPLOSIONS.

ANOTHER RECOMMENDATION UNDER CONSIDERATION IS IMPROVING FACILITIES FOR FORENSIC TESTS IN REGIONAL AREAS.

MR VAUGHAN SAID THE GOSS GOVERNMENT BELIEVED WORKERS HAD A RIGHT TO A SAFE WORKPLACE.

"I HAVE SOUGHT AND SO FAR RECEIVED THE CO-OPERATION OF ALL PARTIES --- UNIONS, MINE MANAGEMENT AND EMERGENCY SERVICES --- IN THIS PROCESS AND I HOPE TO SEE THAT CONTINUE IN THE INTERESTS OF SAVING LIVES," MR VAUGHAN SAID.
