

CONTINUOUS HIGHWALL MINING - OAKY CREEK

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SUMMARY

At 7pm on February 1, 1997 Thiess Contractors Oaky Creek Highwall Mining team achieved 1,000 days lost time injury free. This paper explains the development of the health and safety plans for the project, significant achievements and the benefits of the Minex Awards to Oaky Creek C.H.M. and Thiess generally. Education and training in both skills health and safety played an important role in developing a teamwork approach to mining. At Oaky Creek and all our projects throughout Queensland/Northern Territory each and every person is encouraged to participate in the way we manage health and safety. Positive communication encourages participation supported by our Thiess Management Systems. These are the key elements in achieving excellent performance.

INTRODUCTION

Thiess operates successfully throughout Australia and South East Asia. At Thiess, we believe that Health and Safety is an integral part of our management system procedures and our people are the key to our success. At Oaky Creek, as with all our projects each and every person plays an important role in the way we manage Health and Safety. This paper gives a brief overview of the Thiess Contractors Pty Ltd Oaky Creek Highwall Mining project, the key factors that made it a success in health and safety and how the Minex application criteria and evaluation can be used to improve safety performance.

The Oaky Creek Continuous Highwall Miner recently relocated to Collinsville is part of the Queensland/Northern Territory business unit based in Brisbane which provides the following services to industry:

- Mining
- Civil Engineering
- Building Construction

Thiess has a proud history of working safely. The welfare of all employees is paramount and the company provides comprehensive training

programs in both skills and occupational health and safety. Training and incentives for safe work practices are encouraged and fully supported at all management levels.

Prior to commencement on site a Health, Safety and Environment Management Plan, based on the Thiess Management System was developed to ensure a sound platform for safe operation of the project. All employees are trained in site safety procedures, accident prevention, safe operation of plant and equipment and the location of emergency equipment.

The introduction of quality management principles into all Health and Safety Management procedures and policies with an emphasis on planning, documented health and safety procedures resulting from hazard identification, and risk analysis supported by regular monitoring through audits, have contributed to the excellent safety record in our mining operations including our Oaky Creek Continuous Highwall Miner project in Central Western Queensland.

OAKY CREEK HEALTH AND SAFETY PERFORMANCE

The Oaky Creek team has continued on from their success of January 1995 when they first received recognition for achieving 300 days without lost time injury. Continual improvement strategies adopted at the commencement of the project have seen the project exceed 1,000 days lost time injury free. Improvement strategies include the following:

- Quarterly Audits conducted by the Queensland/NT Safety Manager (audit average 1995 was 94%).
- Continual evaluation and upgrade of the highwall mining operation.
- Adherence to Corporate and business unit targets.
- A structured training matrix which is designed to broaden employees skill base and leadership skills.
- A strategic alliance with Joy Manufacturing which focuses on the safety and productive performance of highwall mining operations in Australia.
- Six monthly reviews of the Health, Safety & Environment Management Plan to ensure the plan remains always valid and effective.
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Significant Achievements:

- Inaugural Minex Awards 1995 "Highly Commended"
- Minex Awards 1996 "Highly Commended"
- Thiess Queensland/Northern Territory business unit Safety Awards winner.
- Award of Merit winners National Safety Council of Australia - 700 days lost time injury free.
- Achieved 750 days lost time injury free on 6 May 1996.

IMPROVEMENTS RESULTING FROM THE MINEX EVALUATION 1995

- Safe work procedures and safety manuals are constantly reviewed and modified where deficiencies are found.
- Employees promoted internally, 2 persons promoted to Level 4 status and 2 award promoted to staff, Foreman.
- Highwall canopy fitted to the front of the C.H.M. launch. This extendable canopy affords protection to personnel when working on the front of the miner (approx cost \$55,000).
- Seats installed on either side of the C.H.M. launch to provide relief to operators working on the platform.
- Lighting improved on the rear of the launch and deck area.
- Major retraction procedures have been refined and improved. New equipment including 40mm wire slings, shackles and upgraded hydraulics have been purchased to improve safety.
- Emergency stop buttons required to trip the control circuit breaker rather than the main substation. Thiess personnel can reset the circuit breaker but not the substation. This modification allows us to re-power the system quickly should someone be trapped.
- The site now has 9 qualified Train the Trainer and Assessors (28% of workforce).
- A significant amount of training has taken place to improve the skill base. Skills improved range from plan associated with C.H.M. to more specialised training including medium voltage switching, Occupational Health and Safety and Mines Official courses.
- Mock highwall failure performed and response analysed.
- Modifications to the lead car made to allow the use of the main propulsion circuit as a

restraining mechanism whilst moving and servicing the system.

SELECTION OF EMPLOYEES, CONTRACTORS AND CONSULTANTS

Applicants for vacant positions are required to complete a standard application form. Reference checks are conducted by contacting two previous employers. Selected employees are then interviewed and sent to an approved doctor for a pre-placement medical examination.

Approved Medical Practitioners with knowledge in Occupational Health are nominated by the Area Safety Manager to provide medical examinations. Pre-placement medicals are conducted in accordance with Coal Board requirements.

SUBCONTRACTORS

When subcontractors are asked to submit a tender for work on a project under our control, they are provided with a schedule of Health Safety and Environmental Requirements and a Health Safety and Environment Tender Evaluation Form.

The completed "Tender Evaluation Forms" are to be returned with the subcontractors tender offer. Subcontractors who do not complete the evaluation forms or who score less than 75% will be eliminated from the selection process.

EDUCATION AND TRAINING

Skill enhancement and training forms part of the schedule of Health Safety and Environmental Requirements. Skills are assessed prior to commencement on the project to ensure employees are:

- Adequately trained to carry out tasks on a multi-skilled operation.
- Receive instruction in the safe use, handling and operation of materials and plant.

Employees are also required to attend a site induction which covers safe work procedures, practices and operating procedures. This induction is to be completed prior to personnel commencing work on site.

INDUCTION TRAINING

Induction training is a mandatory requirement for all employees, staff, visitors, consultants and

subcontractors who are required to enter and work at any site. The induction is tailored to suit the particular requirements of the project and includes but is not limited to the following:

- Plan of site layout showing:
 - F.A. facilities
 - Fire Extinguishers Location
 - Restricted Access
 - Amenities Location
 - Evacuation Routes and Muster Areas
- Hazard Reporting Procedure
- Accident/Incident Reporting Procedures
- Emergency Evacuation
- First aid
- Health and Safety Committees and Toolbox Meetings
- Personal Protective Equipment
- Isolation Procedures
- Plant Safety Procedures
- Drugs and Alcohol
- Hazardous Substances
- Disciplinary Procedure

A copy of our Health Safety and Environment Policy and Safety Instruction Booklet and induction handout is provided to all employees.

On completion of the induction all attendees are required to complete a questionnaire in order to demonstrate an understanding of the program.

All employees undergo a three day Oaky Creek Coal induction and a Thiess Contractors Site Specific induction. The employees are then trained on the plant and equipment by a qualified trainer.

On reaching competency with the equipment they are then given approval to operate on the mine site. A training matrix is circulated and displayed so the client, supervisors and employees can see who is authorised to operate the different types of equipment. Training manuals for all site equipment are available to all employees and are situated in crib rooms and the site office.

TECHNICAL TRAINING

- Personnel are trained in aspects related to their association with C.H.M. activities, including: mobile equipment, launch platform, C.H.M. operator, methane monitor calibration, low voltage switching and statutory compliances.
- All supervisory staff and safety committee members have OH&S accreditation.
- The site has 7 award and 2 staff qualified as Train the Trainers and Assessors.
- Training requirements are decided by: site discussion, OH&S meetings, industry/

statutory requirements and broad based corporate objectives, e.g. first aid, workplace health and safety officer, manual handling.

- Thiess training manual is available for personnel to select courses.
- Trends and type of training has gone from basic operational practice at commencement to more specialised training once the project was established.
- The effectiveness of training can be monitored by the continuing of our safety achievements, low incident frequency, reduced damage to equipment and productivity gains.

COMMUNICATION

General communication on site is through notice boards, memos, minutes of our safety Committee meetings, and direct communication with individual employees.

Specific communication to ensure awareness of accidents, feedback from Safety Committee Meetings, results of Accident Investigations and Workplace Inspections is achieved through Toolbox Meetings which occur on a weekly basis.

In 1995 Thiess visited the USA on a Best Practices Tour. Our team consisted of an employee representative, mining operations manager and human resources manager.

Team building days are set aside to discuss and evaluated issues relevant to the project. These include company based issues, safety and training. Subjects dealt with in these sessions include:

- Company Objectives and Policy
- Operational Safety
- C.P.R. Refresher Courses
- Cable and Manual Handling
- Union Related Issues

The continual teamwork approach has been the key to our success, a constant flow of information between management and crew have helped this project become one of the success stories of Australian mining.

EMPLOYEE INVOLVEMENT AND ACCOUNTABILITY

Employees on site are involved with Health and Safety through:

- Health and Safety Committees
- Toolbox Meetings
- Workplace Hazard Inspections
- Risk Assessments

- Developing Safe Work Procedures
- Writing Training Manuals

The Health and Safety Committees are formed from management representatives, employees and safety representatives to discuss and develop strategies, carry out inspections and provide advice on health and safety solutions. Meetings are minuted and copies are provided for all members and displayed on notice boards.

Toolbox Meetings are held on a weekly basis and include all members of a work team. The meeting discusses activities being performed or about to be performed by the work team. The meeting is recorded with a copy to the notice board.

Workplace inspections are conducted regularly as determined by the Project Manager and the work teams. Periods between inspections will not exceed one week. The inspections are carried out by representatives of the Health and Safety Committee and persons nominated by the Project Manager.

The inspection report is documented and must be signed off by the Project Manager when the corrective action is completed.

Employees are also involved in the conduct of risk assessments.

Employees are involved in safety planning and goal setting through the Health and Safety Committees, Toolbox Meetings and the Safety Award System.

BEHAVIOUR/CULTURE

At Oaky Creek a safety culture was created on site by management and employees sharing the same goal to ensure safety is a prerequisite for each activity. Our crews are extremely safety conscious, the well being of each member being important to the other. The safety incentive system for achieving target number of days without a lost time injury increases safety awareness and is a motivator for all employees on site to carry out their duties safely.

While incentive schemes have their critics it must be stated that they cannot stand alone. Only professional safety management systems and a committed work team will provide the results displayed by our Oaky Creek Project. 750 days lost time injury free on 6 May 1996.

CONCLUSION

Our Oaky Creek C.H.M. team has recently moved to our Collinsville Coal Operation Project and have exceeded 1,000 days lost time injury free. The key to their success has been and remains a

commitment to systems communication and teamwork. The Minex Awards have in no small way contributed to our success. I would urge you to participate in next year's awards.

The evaluation process assists for two reasons:

- Firstly in developing your submission you will find that best practice is achievable through the use of the submission criteria. It allows you to clearly define gaps in your management system and ways to improve.
- Secondly the evaluation process will provide you with a definite guide to further improvement.

Increasing and continual support for the Minex Awards can be a powerful tool to improving health and safety performance in Australian mining.