



EXAMINATION PANEL REPORT FOR OPEN CUT EXAMINERS - March 2013

APPLICATIONS

Number applied: 71
Number approved: 70

WRITTEN EXAMINATION

Date: 1 March 2013

Number of candidates: 57
Did Not Sit: 13
Passed: 10 (17 % success rate)

Highest mark: 226/300 marks
Average mark: 154

Comments: Generally the standard of the answers in the written questions was poor for both legislation and practical. Candidates seem to be sitting for their Certificate IV as soon as possible and are rushing into the OCE written exams before gaining the necessary practical experience to pass the exams.

Written examination papers

OCE1 Mining Legislation - Paper total 100 marks

Number of candidates: 52
Minimum mark obtained: 20
Maximum mark obtained: 90
Average mark obtained: 41

Overall comments: Once again the candidates struggled with the open book concept. In most of the questions a clue was given to the answer. Some comments from the candidates were that they did not consider the WHS Act in their preparation.

Analysis of Questions

Question 1 - Health and Safety (Worth 20 Marks)

Question asked what the OCE would do if asked to gather any information the Chief Inspector has published relating to Health and Safety.

Minimum mark obtained: 0
Maximum mark obtained: 20
Average mark obtained: 5

This question had been asked before in the closed book exam format and the answers this time were generally very poor. Clause 211 & 212 of the CMHS Regs held the answers to this question with the heading of 211 being “Chief Inspector may publish material relating to safety or health”

Question 2 - Shot Firing (Worth 20 marks)

Question asked what the OCE would do if their shot firer reported that a shot just fired has damaged a lighting plant in the exclusion zone.

Minimum mark obtained: 0
Maximum mark obtained: 20
Average mark obtained: 6

As in previous exams, once again most candidates assumed this was a reportable incident and then went on to relate all the requirements of handling a notifiable. This is NOT a notifiable incident. No one’s life was at risk and the fact that equipment was left in the exclusion zone is the company’s problem.

Question 3 - Risk (Worth 20 marks)

Question asks what the legislation says about the control of Risk.

Minimum mark obtained: 0
Maximum mark obtained: 20
Average mark obtained: 11

Clause 4 of the CMHS Act and Clause 17 & 18 of the WHS Act was what was looked for in this question. In a lot of cases the candidates mention only one of the Acts and not both.

Question 4 - Fitness Program (Worth 20 marks)

Question asks how the OCE would develop a fitness for work program, what limits to set and what other information to use.

Minimum mark obtained: 5
Maximum mark obtained: 20
Average mark obtained: 11

This question was generally well handled with most of the candidates talking about Clause 148 of the CMHS Regs but most failed to mention the DPI Fatigue Management Guidelines

Question 5 - Employee Records (Worth 20 marks)

Question asks what the OCE is to do when a Union Industrial Official wishes to enter the mine and inspect employee records and the OCM is not on site.

Minimum mark obtained: 0
Maximum mark obtained: 20
Average mark obtained: 5

Most candidates struggled with this question and talked about the Industry Check Inspector. Clause 120 WHS Act highlight “Entry to inspect employee records or information held by another person” Some candidates claimed that was not fair however, the Certificate they are sitting for can be used in the whole of NSW and not all mines have the front office staff of the larger companies. In some cases, it is just the Manager of Mining Engineering, Office Clerk and Safety Officer and if they are absent, the OCE is it.

OCE2 Coal Mining Practice – Paper total 200 marks

Number of candidates: 42
Minimum mark obtained: 47
Maximum mark obtained: 154
Average mark obtained: 113

Overall comments: Generally the standard of answers should a lack of practical experience and inadequate bench marking.

Analysis of Questions

Question 1 - Dragline Operations (Total of 50 marks)

Question about dragline operations was in two parts, each worth 25 marks. The first part required diagrams of 2 specific dig methods and the second asking about the hazards and controls for the coaling fleet.

Minimum mark obtained: 38
Maximum mark obtained: 44
Average mark obtained: 41

- This question was attempted by very few candidates despite it being a very basic dragline related question.
- 2 of the basic dig methods were required to be described using diagrams. While the theory of dig methods were generally known by those who attempted the question, the detail of dimensions of benches, depth of dig etc were occasionally impractical or incorrect.
- Candidates generally identified the obvious hazards associated with dragline and coaling operations interactions, however some candidates would benefit from using the Nertney wheel or 10 hurdles as a prompt to gain the full scope of hazards and controls.

Question 2 (Compulsory) - Environment and Community (Total of 50 Marks)

Question about complaints on impacts of operation was in two parts. The first part requires detail of controls to reduce 6 operational impacts (40 marks) and the second part asking about the controls for dust (10 marks).

Minimum mark obtained: 15
Maximum mark obtained: 37
Average mark obtained: 28

- OCEs are required to control environmental hazards as part of their role.
- Candidates generally demonstrated an appreciation of hazards and controls relating to risks impacting on the environment and community.
- Candidates who performed well in this question provided a comprehensive range of hazards and controls associated with the six impacts listed. The use of the Nertney wheel would assist candidates in providing a thorough list of controls.
- A common observation was that some candidates generally lacked scope in their answers, in particular the range of controls required to reduce impacts and in the second part of the question dealing with implementation of dust controls..
- Although candidates demonstrated reasonable knowledge relating to noise and dust impacts, many were deficient in knowledge relating to blasting impacts i.e. fume, vibration, over pressure.

Question 3 - Incident Management (Total of 50 Marks)

Question about blast damage to a fuel tank and hot work about to resume was in three parts. The first part required a list of expected hazards & management of situation to bring it under control (30 marks). The second part is notifications (10 marks) and the third part asks for provisions to prevent re-occurrence of incident (10 marks).

Minimum mark obtained: 20
Maximum mark obtained: 45
Average mark obtained: 33

- Generally, candidates demonstrated adequate knowledge of controlling this incident
- This question also tested practical knowledge/application of existing containment requirements (ie bunding) for fuel storage. This was not demonstrated well amongst the candidates' responses
- Responses for the notification process purely focussed on statutory notifications and often failed to acknowledge key stakeholders such as maintenance representatives
- Whilst most controls identified were adequate, some focussed solely on blasting and failed to recognise other controls such as mechanical/engineering controls.
- Inspections also missed as a control – important as the nature of this incident occurs over time and can be picked up with a thorough inspection program

Question 4 - Slope Stability (Total 50 Marks)

Question asks about a major pit failure in 6 questions: the geology, immediate actions of the OCE, recognising pre-failure signs, notification, measures to prevent further risk to personnel and future changes/controls to prevent further failures.

Minimum mark obtained: 14
Maximum mark obtained: 40
Average mark obtained: 27

- Generally, candidates demonstrated adequate knowledge of what type of failure the photo showed
- It tested their knowledge on an important issue for all Open Cut mines
- Responses generally understood the questions but failure to mention key points i.e. CL 55 Failure of Strata and the use of TARPs to manage the risk for future controls, and review the slope stability Plan CL 29

Question 5 (Compulsory) - Drill & Blast (Total of 50 Marks)

Question about the requirements of an OCE in-charge of the introduction of a new drill & initial pattern design and was in three parts. The requirements before drill is used (15 marks) effects on drill steel diameter (10 marks) and calculations and assumptions for three recommendations (25 marks).

Minimum mark obtained: 1
Maximum mark obtained: 42
Average mark obtained: 21

This question was answered poorly with most candidates' not reading Part B correctly. The understanding of Drill and Blast process was poor and their ability to do simple maths to work out the charge weight and pattern size after been given all the data is an area of concern

Most candidates didn't know the simple rules of thumb for working out the stemming height of a blast hole

Question 6 – First Aid (Total of 50 Marks)

Question about the actions of the OCE after a possible fluid injection incident and was in four parts. The OCE's response to the incident (15 marks), the possible causes (10 marks), the control measures to prevent re-occurrence (15 marks) & reporting chain (10 marks).

Minimum mark obtained: 10
Maximum mark obtained: 44
Average mark obtained: 28

- Generally, candidates demonstrated adequate knowledge of controlling this incident for grease injection
- Failure to mention key improvements solutions i.e Install a relief valve and prepare a how-to guide
- Overall this question was answered well.

Oral examination

Date: 2 May 2013

Number of candidates: 25
Did not sit: 5
Passed: 12 (60 % success rate)

Overall comments:

- Candidates that performed well could demonstrate a solid base of step-up experience and provided documentary evidence to support visits to other mine sites. Their confidence and increased knowledge tended to reflect this experience.
- In many cases candidates failed to provide evidence of mine visits. This was a notable deficiency compared to the last orals. Candidates commonly stated excuses e.g. ran out of time or too busy to attend visits. Others claimed to have left their completed sheets at home. Candidates should not under estimate the benefits of mine visits.
- The ability and confidence to apply systems requirements to scenarios was in many cases a reflection of the time spent as step-up supervisors where they have gained experience first-hand.
- Some candidates were obviously under prepared and resulted in much prompting by examiners in able to gain responses to questions

Analysis of topics on which candidates were not yet competent

Topics examined

- Legislative Framework
- Incident Management
- Fatigue
- Explosives