

NEBOSH

MANAGEMENT OF HEALTH AND SAFETY

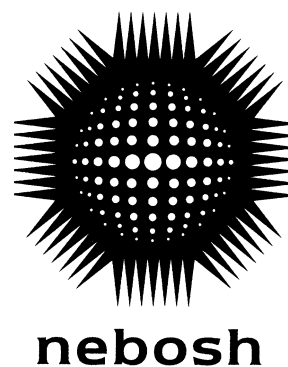
UNIT IG1:

For: NEBOSH International General Certificate in Occupational Health and Safety

MANAGEMENT OF INTERNATIONAL HEALTH AND SAFETY

UNIT IGC1:

For: NEBOSH International General Certificate in Occupational Health and Safety
NEBOSH International Certificate in Construction Health and Safety
NEBOSH International Certificate in Fire Safety and Risk Management



Open Book Examination

Available for 24 hours from 28 October 2020, 09:00 GMT

Guidance to learners

This is an open book examination. It is not invigilated, and you are free to use any learning resources to which you have access, eg your course notes, or a website, etc.

By submitting this completed assessment for marking, you are declaring it is entirely your own work. Knowingly claiming work to be your own when it is someone else's work is malpractice, which carries severe penalties. This means that you must **not** collaborate with or copy work from others. Neither should you 'cut and paste' blocks of text from the Internet or other sources.

The examination begins with a realistic scenario to set the scene. You will then need to complete a series of tasks based on this scenario. Each task will consist of one or more questions.

Your responses to **most** of these tasks should wholly, or partly, draw on relevant information from the scenario. The task will clearly state the extent to which this is required.

The marks available are shown in brackets to the right of each question, or part of each question. This will help guide you to the amount of information required in your response. In general, one mark is given for each correct technical point that is clearly demonstrated. Avoid writing too little as this will make it difficult for the Examiner to award marks. Single word answers or lists are unlikely to gain marks as this would not normally be enough to show understanding or a connection with the scenario.

You are **not** expected to write more than 3000 words in total.

Try to distribute your time and word count proportionately across all tasks.

It is recommended that you use the answer template.

Please attempt **ALL** tasks.

SCENARIO

You have a dual role as an experienced and respected Process Operator and a representative of workers at a large, high hazard site, run by an international chemical manufacturing organisation.

The organisation has a reputation for having a world-class health and safety culture, with many other industries using them as a benchmark. It is a legally compliant organisation that sets clear objectives and checks that they are met. It employs and retains motivated workers who are aware of their clearly defined and documented responsibilities and want to continuously improve in their roles. Absence and sickness rates are low. The organisation listens to workers when they raise concerns and responds professionally to external customer complaints. The organisation also takes pride in recording low accident and incident rates and investigating any near misses to learn lessons and prevent more serious outcomes. Across the organisation there are clear lines of internal and external communication. This allows effective resolution of complaints. The organisation is fully insured even though the premium is high. The organisation conducts frequent internal audits and is also externally audited.

The process you operate is running at a reduced production rate, due to a technical problem with a large storage tank containing a highly toxic product. You have an idea what the problem is, but knowing the limits of your authority, you feel the issue should be escalated to someone more senior. Local site managers, engineers, supervisors and operators meet to discuss the situation. They conclude that the tank has an internal blockage, that would normally require a complete process shutdown to clear. However, the planned maintenance shutdown is 12-months away. They decide to seek advice from the corporate management team to explore whether there is a different solution that would resolve the blockage problem, but keep production going.

The local site and corporate management teams meet by video conference. The corporate management team includes a very experienced senior engineer with 25-years' company service. This engineer has overseen process plant modifications, at many international sites, with zero lost time incidents. They all agreed that modifications could safely be made to the tank, without the need to shut it down, and that the necessary resources would be made available for this work.

The senior engineer is sent to the site to advise on, and manage, the changes that are needed to the tank; and on the day of arrival presents a solution to you. You are unfamiliar with the technology to be used for the modification and your reaction is one of disbelief, and you politely ask if the engineer is serious. The engineer invites you to a meeting to conduct a systematic and detailed risk assessment of the tank modification task. The Health and Safety Adviser, worker representatives and Plant Manager will also be at the meeting.

At the meeting, the engineer introduces the proposed tank modification and leads the risk assessment exercise. The risk assessment includes consideration of the highly toxic chemical, the release of which would be catastrophic for workers, as well as people in adjacent businesses, residential houses and schools. The engineer confirms that this proposed modification method is a safe and widely used solution where the safety improvements are worth the cost. The risk assessment then continues with discussion and agreement on risk evaluation, existing control measures and any additional control measures necessary. Some of these control measures include safe systems of work, a permit-to-work system, supplementary emergency arrangements and suitable induction training for all contractors. Collectively, these precautions and control measures reduce high risk to low risk.

A summary of the risk assessment is circulated to all workers likely to be affected by the proposed modification. The full version of the risk assessment will be made available on request.

Prior to commencing the work, a permit-to-work is issued to the contractors carrying out the tank modification. The permit-to-work includes an explanation about the associated risk assessment and how the plant has been safely prepared for this non-routine modification. The contract workers accept the permit-to-work with the necessary precautions, including wearing of specified personal protective equipment. Precautions listed on the permit-to-work are also communicated to all

contractors and other plant workers who may be affected. The permit-to-work explains that precautions will be enforced, along with any other site rules, by active monitoring. This will be done while you carry out routine plant checks and simultaneously check on the progress of the modification.

To confirm safe working and clarify overall expectations, you, along with an independent site contact have been nominated to monitor and liaise with the contractors. The independent site contact will also actively monitor and check additional expectations, such as contractor site entry and exit control, resolution of any queries and the supervision standard. You and the independent site contact will check to see whether the modification work is being controlled and is progressing as planned. This is consistent with the organisation's safe system of work based on the findings of the risk assessment and the method statement provided by the contractor, the aim being to complete the job safely without incident.

Findings from inspections form part of the overall health and safety performance review. The performance review enables an overall assessment of opportunities for continuous improvement within the site and reveals any need for change.

Task 1: Discussing moral reasons for managing health and safety

- 1 Comment on the organisation's health and safety morals. (10)

Note: You should support your answer, where applicable, using relevant information from the scenario.

Task 2: Roles and responsibilities

- 2 For a health and safety management system to work properly you need to have clear roles and responsibilities.
- Comment on the evidence from the scenario that would contribute to the effectiveness of the roles and responsibilities. (10)

Task 3: Influencing health and safety culture

- 3 Based on the scenario only, what are the indicators of health and safety culture in the organisation? (20)

Task 4: Why lessons should be learnt from incidents

- 4 Other than a general improvement of health and safety, what specific reasons are there for this organisation to learn lessons from incidents? (10)

Task 5: Risk assessment

- 5 The risk assessment for the proposed storage tank modification has been completed.
- Based on the scenario only, comment on whether the risk assessment is 'suitable and sufficient' in the following areas
- (a) who might be affected. (4)
- (b) the precautions are reasonable, and the remaining risk is low. (6)

Note: The HSE Document 'Managing for Health and Safety' (HSG65) states that a risk assessment must be 'suitable and sufficient'.

Task 6: Permit-to-work system

- 6 The organisation has an effective permit-to-work (PTW) system.
- Why should a PTW be used to help manage this storage tank modification? (10)
- Note:** You should support your answer, where applicable, using relevant information from the scenario.

Task 7: Managing contractors

- 7 The contractors, who specialise in the tank modification method, are ready to start work having been issued with a permit-to-work.

Based on the scenario only, discuss how effectively the contractors will be managed by the organisation during the modification.

(10)

Task 8: Health and safety performance (management) review

- 8 The organisation's world class reputation is partly due to carrying out an annual health and safety performance review.

What types of information should this review consider?

(20)

Note: You should support your answer, where applicable, using relevant information from the scenario.

End of examination

Now follow the instructions on submitting your answers.