



KEMENTERIAN SUMBER MANUSIA

**LEMBAGA PENILAIAN KOMPETENSI KESELAMATAN DAN  
KESIHATAN PEKERJAAN**

**PEPERIKSAAN PENAKSIRAN RISIKO KESIHATAN KIMIA**  
*CHEMICAL HEALTH RISK ASSESSMENT EXAMINATION*

**KERTAS 2 (BAHAGIAN A)**  
*PAPER 2 (PART A)*

**TUGASAN TEMPAT KERJA**  
*WORKPLACE ASSIGNMENT*

**GARIS PANDUAN TUGASAN TEMPAT KERJA**  
*WORKPLACE ASSIGNMENT GUIDELINES*

## **ARAHAN:**

**CALON DIKEHENDAKI MEMBACA ARAHAN DI BAWAH DENGAN TELITI DAN MENGIKUTI SEMUA ARAHAN.**

### **A. KEPERLUAN TUGASAN TEMPAT KERJA**

1. Pilih satu tempat kerja.
2. Pilih **DUA (2)** unit kerja dari tempat kerja.
3. Kenal pasti sekurang-kurangnya **TIGA (3)** bahan kimia berbeza yang berbahaya kepada kesihatan yang digunakan dalam setiap unit kerja. Salah satu daripada bahan kimia mestilah campuran kimia dan berikan justifikasi berserta lampiran bagi pengelasan campuran bahan kimia tersebut. Pastikan sekurang-kurangnya satu daripada bahan kimia tersebut mempunyai pendedahan melalui penyedutan dan serapan kulit.
4. Jalankan penaksiran risiko bahan kimia yang dikenal pasti di setiap unit kerja.
5. Bincangkan hasil penaksiran risiko bahan kimia yang dikenal pasti dalam setiap unit kerja.
6. Menilai dan membincangkan kecukupan langkah kawalan sedia ada dalam mengawal risiko bahan kimia yang dikenal pasti dalam setiap unit kerja.
7. Membuat kesimpulan penaksiran.
8. Mengenal pasti dan mengesyorkan tindakan yang perlu diambil terhadap kawalan teknikal, kawalan organisasi yang menekankan latihan dan latihan semula, Kesiapsiagaan tindakbalas kecemasan, pemantauan pendedahan dan pengawasan perubatan.
9. Menentukan tindakan mengikut keutamaan.
10. Menyediakan laporan penaksiran risiko kimia kepada kesihatan.

Nota: Rujuk manual, “*A Manual of Recommended Practice on Assessment of the Health Risks Arising from the Use of Chemicals Hazardous to Health at the Workplace,*” (first reprint 2018)

## B. FORMAT LAPORAN

### 1. Format Teks

- i. Tugas ini hendaklah ditaip dengan jelas menggunakan sama ada dalam Bahasa Melayu atau Bahasa Inggeris.
- ii. Fon yang digunakan mestilah Times New Roman bersaiz 12 dan menggunakan langkau 1.5 baris.
- iii. Margin kiri dan kanan mestilah berukuran 2.5 cm, manakala margin atas dan bawah mestilah berukuran 4 cm dan diformatkan kepada saiz kertas A4.
- iv. Laporan mesti mempunyai muka depan (sila rujuk Lampiran 1).

### 2. Format Laporan dan Skema Pemarkahan

NO.	KETERANGAN	MARKAH
2.1	BORANG PERAKUAN TUGASAN TEMPAT KERJA	WAJIB
2.2	HALAMAN TAJUK LAPORAN	0.5
2.3	<i>CHRA NOTIFICATION FORM</i>	1.5
2.4	RINGKASAN EKSEKUTIF	10
2.5	ISI KANDUNGAN	3
2.6	Pengenalan	10
2.7	KETERANGAN PROSES DAN UNIT KERJA	10
2.8	KAEDAH PENAKSIRAN	10
2.9	HASIL PENAKSIRAN	25
2.10	PERBINCANGAN	15
2.11	SARANAN TINDAKAN YANG AKAN DIAMBIL	11
2.12	LAMPIRAN	4
<b>JUMLAH</b>		<b>100</b>

Nota: Rujuk format laporan berdasarkan “*A Manual of Recommended Practice on Assessment of the Health Risks Arising from the Use of Chemicals Hazardous to Health at the Workplace,*” (first reprint 2018).

## **2.1 BORANG PERAKUAN TUGASAN TEMPAT KERJA (WAJIB)**

- i. Rujuk Lampiran 2.
- ii. Borang Perakuan Tugas Tempat Kerja adalah dokumen wajib. Penilai akan menggagalkan calon sekiranya calon tidak memuat naik Borang Perakuan Tugas Tempat Kerja atau tiada pengesahan daripada syarikat (tandatangan wakil & cop syarikat).

## **2.2 HALAMAN TAJUK LAPORAN (0.5 markah)**

Rujuk Lampiran 1.

## **2.3 CHRA NOTIFICATION FORM (1.5 markah)**

Rujuk Lampiran 3.

## **2.4 RINGKASAN EKSEKUTIF (10 markah)**

Tulis satu muka surat ringkasan eksekutif yang menerangkan tentang

- i. Lokasi dan tarikh penaksiran.
- ii. Objektif utama penaksiran.
- iii. Aktiviti utama penaksiran (Unit kerja yang dipilih, jumlah bilangan bahan kimia yang ditaksir).
- iv. Ringkasan hasil penaksiran.
- v. Saranan utama kepada majikan.

## **2.5 ISI KANDUNGAN (3 markah)**

- i. Bahagian utama dan sub bahagian.
- ii. Senarai rajah dan jadual.
- iii. Rujukan.

## **2.6 PENGENALAN (10 markah)**

- i. Pengenalan kepada syarikat dan tempat kerja.
- ii. Objektif dan skop penaksiran (Ringkasan penaksiran dan hasil penemuan – jika berkenaan).

## 2.7 KETERANGAN PROSES DAN UNIT KERJA (10 markah)

- i. Proses yang dijalankan di tempat kerja – carta-alir proses, keterangan proses.
- ii. Potensi pendedahan kepada CHTH.
- iii. Unit kerja – kumpulan pendedahan yang sama, kerja rutin dan bukan rutin, corak syif, lokasi kerja, kategori kerja dan bilangan pekerja.

## 2.8 KAEDAH PENAKSIRAN (10 markah)

- i. Kaedah yang digunakan untuk penaksiran.
- ii. Penaksiran sedutan.
- iii. Penaksiran derma.
- iv. Penaksiran pengambilan.

## 2.9 HASIL PENAKSIRAN (25 markah)

- i. Senarai hazard yang dikenalpasti.
- ii. Jadualkan hasil penaksiran terhadap hazard yang dikenalpasti.
- iii. Senaraikan faktor-faktor pembolehubah bagi setiap unit kerja.
- iv. Jadualkan hasil penaksiran pendedahan bagi setiap unit kerja.
- v. Jadualkan hasil penaksiran tahap risiko bagi setiap unit kerja.
- vi. Nyatakan kesesuaian langkah kawalan sedia ada bagi setiap unit kerja.
- vii. Nyatakan langkah tindakan bagi setiap bahan kimia dalam unit kerja.

## 2.10 PERBINCANGAN (15 markah)

- i. Dengan menggunakan borang A–D, bincangkan semua faktor yang boleh menyumbang kepada risiko yang signifikan bagi unit kerja.
- ii. Dengan menggunakan borang A–D, hubungkan faktor-faktor tersebut dengan tahap risiko dan kesesuaian langkah kawalan.
- iii. Bincangkan sebarang pemerhatian positif dan/atau negatif mengenai amalan kerja, prosedur, langkah kawalan dll. / maklum balas pekerja / penemuan penaksiran terdahulu yang boleh mempengaruhi hasil penaksiran.

### **2.11 SARANAN TINDAKAN YANG AKAN DIAMBIL (11 markah)**

- i. Tindakan yang perlu diambil terhadap kawalan teknikal.
- ii. Tindakan yang perlu diambil terhadap kawalan organisasi dengan penekanan pada latihan dan latihan semula.
- iii. Tindakan yang perlu diambil terhadap ERP.
- iv. Tindakan yang perlu diambil terhadap pemantauan pendedahan dengan justifikasi.
- v. Tindakan yang perlu diambil terhadap pemantauan perubahan dengan justifikasi.
- vi. Tentukan keutamaan tindakan untuk setiap cadangan yang dibuat.

### **2.12 LAMPIRAN (4 markah)**

- i. Borang (A)
- ii. Borang (B)
- iii. Borang (C)
- iv. Borang (D)
- v. Pelan susun atur dan lokasi pekerja yang dipilih untuk penaksiran
- vi. Carta-alir proses
- vii. Maklumat lain yang berkaitan (Klasifikasi kimia)
- viii. Rujukan

### C. PENYERAHAN LAPORAN TUGASAN TEMPAT KERJA

Laporan Tugas Tempat Kerja (WPA) yang lengkap hendaklah dimuat naik secara berasingan dengan Borang Perakuan Tugas Tempat Kerja (Lampiran 2).

Kedua-dua dokumen perlu dimuat naik secara dalam talian di <https://myexam.niosh.net.my/> sebelum tarikh akhir pengemukaan WPA (Rujuk Jadual Peperiksaan).

### E. KERTAS 2 - BAHAGIAN B : PEMBENTANGAN

1. Pembentangan adalah berdasarkan kepada **laporan tugas dan pengetahuan dalam bidang CHRA**. Anda dikehendaki membentangkan laporan seolah-olah anda membentangkannya kepada pihak pengurusan. Pembentangan tersebut hendaklah merangkumi perkara-perkara seperti berikut:
  - i. Objektif dan skop penaksiran risiko bahan kimia berbahaya kepada kesihatan
  - ii. Penerangan tentang proses kerja dan unit kerja yang ditaksirkan
  - iii. Kaedah penaksiran
  - iv. Hasil/dapatan penaksiran
  - v. Saranan
2. Pembentangan ini hendaklah disediakan dalam bentuk Microsoft PowerPoint dan dicetak sebanyak DUA (2) salinan untuk diberikan kepada panel pembentangan. Pembentangan ini hendaklah selari dengan WPA yang dihantar.
3. Calon **TIDAK DIBENARKAN** membuat apa-apa perubahan terhadap pembentangan selepas pengemukaan WPA.
4. Tempoh sesi pembentangan:
  - i. Pembentangan = 20 minit
  - ii. Soal jawab = 30 minit

**INSTRUCTION:**

***CANDIDATES MUST READ THE FOLLOWING INSTRUCTIONS CAREFULLY AND FOLLOW ALL INSTRUCTIONS.***

**A. WORKPLACE ASSIGNMENT**

1. Choose a workplace.
2. Select **TWO (2)** work units from a workplace.
3. Identify at least **THREE (3)** different chemicals hazardous to health used in **each** work unit. **ONE (1)** of the chemicals must be a chemical mixture and justify with attachment the classification of the mixture. Ensure at least **ONE (1)** of the chemicals has an exposure through inhalation and dermal .
4. Carry out a risk assessment of the chemicals identified in each work unit.
5. Discuss the finding of the risk assessment of chemicals identified in each work unit.
6. Evaluate and discuss the adequacy of existing control measures in controlling the risks of chemicals identified in each work unit.
7. Conclude the assessment.
8. Identify and Recommend action to be taken on technical control, organisational control with emphasis on training and retraining, emergency response preparedness, exposure monitoring and medical surveillance.
9. Assign action priority.
10. Prepare a Chemical Health Risk Assessment (CHRA) report.

*Note: Please refer to Manual of Recommended Practice on Assessment of the Health Risks Arising from the Use of Chemicals Hazardous to Health at the Workplace,” (first reprint 2018)*



## **B. FORMAT OF ASSIGNMENT REPORT**

### **1. Text Format**

- i. *This report of the assignment must be clearly typed in either Bahasa Melayu or English.*
- ii. *The font used must be Times New Roman size 12 and use 1.5 spacing.*
- iii. *The left and right margins must be 2.5cm, while the top and bottom margins must be 4cm and formatted in paper-sized A4.*
- iv. *The report must have a front cover (Please refer to Appendix I).*

### **2. Report Format and Marking Scheme**

<b>NO.</b>	<b>DETAILS</b>	<b>MARKS</b>
2.1	WORKPLACE ASSIGNMENT DECLARATION FORM	COMPULSORY
2.2	REPORT TITLE PAGE	0.5
2.3	CHRA NOTIFICATION FORM	1.5
2.4	EXECUTIVE SUMMARY	10
2.5	TABLE OF CONTENTS	3
2.6	INTRODUCTION	10
2.7	PROCESS AND WORK UNIT DESCRIPTION	10
2.8	ASSESSMENT METHODOLOGY	10
2.9	ASSESSMENT FINDINGS	25
2.10	DISCUSSION	15
2.11	RECOMMENDATION ON ACTION TO BE TAKEN	11
2.12	APPENDICES	4
<b>TOTAL</b>		<b>100</b>

*Note: Please refer to Manual of Recommended Practice on Assessment of the Health Risks Arising from the Use of Chemicals Hazardous to Health at the Workplace,” (first reprint 2018).*

## **2.1 WORKPLACE ASSIGNMENT DECLARATION FORM (COMPULSORY)**

- i. *Refer to Appendix 2.*
- ii. *The Workplace Assignment Declaration form is a mandatory document. The assessor will fail the candidate if the candidate does not upload the Workplace Assignment Declaration Form or if there is no verification from the company (representative's signature & company stamp).*

## **2.1 REPORT TITLE PAGE (0.5 marks)**

*Refer to Appendix 1.*

## **2.2 CHRA NOTIFICATION FORM (1.5 marks)**

*Refer to Appendix 3.*

## **2.3 EXECUTIVE SUMMARY (10 marks)**

*Write a one-page summary to explain the*

- i. *Location and Date of Assessment.*
- ii. *Main Objective of Assessment.*
- iii. *Main Activities of the Assessment (Work unit selected, total number of chemical assessed).*
- iv. *Summary of findings.*
- v. *Main recommendation to the employers.*

## **2.4 TABLE OF CONTENTS (3 marks)**

- i. *Main and sub section.*
- ii. *List of figure and table.*
- iii. *Appendices.*

## **2.5 INTRODUCTION (10 marks)**

- i. *Introduction to the company and the work site.*
- ii. *Objectives and scope of assessment (Summary of previous assessments and findings – if applicable).*

**2.6 PROCESS AND WORK UNIT DESCRIPTION (10 marks)**

- i. *Process carried out at work place – process flow chart, process description.*
- ii. *Potential exposure to CHTH.*
- iii. *Work unit – similar exposure group, routine and non-routine work, shift pattern, job location, category and number of workers.*

**2.7 ASSESSMENT METHODOLOGY (10 marks)**

- i. *Methodology applied for the assessment.*
- ii. *Inhalation assessment.*
- iii. *Dermal assessment.*
- iv. *Ingestion assessment*

**2.8 ASSESSMENT FINDINGS (25 marks)**

- i. *List the hazards identified.*
- ii. *Tabulate the result of Hazard determination.*
- iii. *List down modifying factors for each work unit.*
- iv. *Tabulate the result of Exposure assessment for each work unit.*
- v. *Tabulate the result of Level of risk for each work unit.*
- vi. *State adequacy of existing control measures for each work unit.*
- vii. *State action priority for each chemical in the work unit.*

**2.9 DISCUSSION (15 marks)**

- i. *Using forms A-D, discuss all factors that may contribute to significant risk of work unit.*
- ii. *Using forms A-D, relate the factors to the level of risk and adequacy of control measures.*
- iii. *Address any positive and or negative observations on work practices, procedures, control measures etc. / workers feedback / previous assessment finding that may influence result of assessment.*

### **2.10 RECOMMENDATION ON ACTION TO BE TAKEN (11 marks)**

- i. *Action to be taken on technical control.*
- ii. *Action to be taken on organizational control emphasis on training and retraining.*
- iii. *Action to be taken on ERP.*
- iv. *Action to be taken on exposure monitoring with justification.*
- v. *Action to be taken on medical surveillance with justification.*
- vi. *Assign action priority to each recommendation made.*

### **2.11 APPENDICES (4 marks)**

- i. *Forms (A)*
- ii. *Forms (B)*
- iii. *Forms (C)*
- iv. *Forms (D)*
- v. *Layout plan and the location of the workers selected for assessment*
- vi. *Process flow-chart*
- vii. *Other relevant information (Chemical Classification)*
- viii. *Reference*

## **D. SUBMISSION OF THE WORKPLACE ASSIGNMENT REPORT**

*The completed Workplace Assignment Report (WPA) must be uploaded separately from the Workplace Assignment Certification Form (Appendix 2).*

*Both documents need to be uploaded online at <https://myexam.niosh.net.my> before the WPA submission deadline (Refer to the Examination Schedule).*

***E. PAPER 2 – PART B : PRESENTATION***

1. *Paper 2 - Part B: Presentation The oral examination will be based on the **assignment report and knowledge in CHRA**. You are required to present the report as if you are presenting it to the management. The presentation should contain the following:
  - i. *Objective and scope of the chemical health risk assessment*
  - ii. *Description of work process and work units assessed*
  - iii. *Assessment methods*
  - iv. *Assessment findings/results*
  - v. *Recommendations**
  
2. *The presentation has to be prepared in Microsoft PowerPoint and must be printed out in **TWO (2)** copies for panel presentation. The presentation must tally with the WPA submitted.*
  
3. *The candidate is **NOT ALLOWED** to make any changes to the presentation after submission the WPA.*
  
4. *Duration of presentation session:*
  - i. *Presentation = 20 minutes*
  - ii. *Questions and answers = 30 minutes*

Lampiran 1 / Appendix 1

**Nota: Ini adalah contoh halaman tajuk Laporan Tugas Tempat Kerja**

*Note: This is only a sample of Workplace Assignment Report title page*

# Report of Chemical Health Risk Assessment

at

A Manufacturing Company  
(font size 22)

By

Name

\_\_\_\_\_

MyKad No. : XXXXXXXX-XX-XXXX

(font size 16)

Chemical Health Risk Assessor Examination  
Paper 2: workplace assignment

(font size 12)

Lampiran 2 / Appendix 2

**BORANG PERAKUAN LAPORAN TUGASAN TEMPAT KERJA**  
**WORKPLACE ASSIGNMENT DECLARATION FORM**

Adalah saya dengan ini mengaku bahawa Tugas Tempat Kerja ini yang disediakan untuk peperiksaan **Penaksiran Risiko Kesehatan Kimia (CHRA)** adalah berdasarkan hasil kerja asal saya sendiri dan maklumat diperolehi hasil lawatan tapak ke tempat kerja yang berkenaan kecuali sedutan atau petikan yang dinyatakan.

Sekiranya maklumat yang dinyatakan tidak benar, pihak Jawatankuasa Kompetensi CHRA di bawah Lembaga Penilaian Kompetensi Keselamatan dan Kesehatan Pekerjaan (LPKKKP) berhak menggagalkan Tugas Tempat Kerja ini.

Borang Perakuan Tugas Tempat Kerja ini adalah dokumen wajib. Penilai akan menggagalkan calon sekiranya tiada pengesahan daripada syarikat (tandatangan wakil & cop syarikat).

*I hereby certify that this Workplace Assignment prepared for the **Chemical Health Risk Assessment (CHRA)** is based on my original work and information gathered from the site visit except for citations and quotations made.*

*If the information stated is not true, the Jawatankuasa Kompetensi CHRA under Lembaga Penilaian Kompetensi Keselamatan dan Kesehatan Pekerjaan (LPKKKP) reserves the right to fail this Workplace Assignment.*

*The Workplace Assignment Declaration form is a mandatory document. The assessor will fail the candidate if no verification from the company (representative's signature & company stamp).*

Tandatangan / Signature : .....

Nama / Name : .....

No. MyKad / MyKad No. : .....

Tarikh / Date : .....

**PENGESAHAN SYARIKAT / COMPANY VERIFICATION**

Saya mengesahkan penama seperti di atas telah menjalankan tugas tempat kerja di premis ini bagi tujuan peperiksaan **Penaksiran Risiko Kesehatan Kimia (CHRA)**:

*I confirm the above-named person has conducted the workplace assignment at this premises for the purpose of the **Chemical Health Risk Assessment (CHRA)** examination:*

Tandatangan / Signature : .....

Nama / Name : .....

Jawatan & Jabatan : .....  
Position & Department

No. Tel. (Pej./Bimbit) : .....  
Tel. No (Off./ Handphone)

Cop rasmi syarikat  
Company official stamp

Tarikh / Date : .....

LAMPIRAN 3 / Appendix 3

APPENDIX 14

*(A Manual of Recommended Practice on Assessment of The Health Risks Arising From The Use Of Chemicals Hazardous To Health At The Workplace)*

**CHRA Notification Form**

Date: \_\_\_\_\_

Workplace: \_\_\_\_\_

Contact Person: \_\_\_\_\_

This is to certify that I have conducted CHRA for the above workplace on \_\_\_\_\_.

2. In compliance to Occupational Safety and Health (Use and Standard of Exposure of Chemicals Hazardous to Health) Regulations 2000, the CHRA report has been submitted, presented and explained to the employer on \_\_\_\_\_.

3. The employer has been informed to take action to control exposure of workers to chemicals hazardous to health as indicated in the CHRA report within one month after receiving the report.

Name of assessor : \_\_\_\_\_

DOSH registration no. : \_\_\_\_\_

Date of assessment : \_\_\_\_\_

Date of completion : \_\_\_\_\_

CHRA report received by : \_\_\_\_\_

Name : \_\_\_\_\_

Designation : \_\_\_\_\_

Date of receipt report : \_\_\_\_\_

Signature : \_\_\_\_\_

**Note:**

The form is subject to changes if necessary from time to time. The assessor should refer to the Department of Occupational Safety and Health on latest directive.