

**PROFESIONAL ALAM SEKITAR DISAHKAN DALAM PENGOPERASIAN
SISTEM PENGAHAR(CEPSO)
PENYEDIAAN LAPORAN LATIHAN DI LAPANGAN**

PERINGATAN PENTING

Di dalam laporan kerja latihan di lapangan, anda hendaklah dengan jelas mengenalpasti di mana anda telah terlibat di dalam proses/aktiviti berikut:

- Mengambil bacaan pengawasan prestasi dan membuat pengukuran menggunakan peralatan mudah alih
- Menyediakan laporan pengawasan prestasi dan membentangkannya kepada jawatankuasa pengawasan prestasi penggahar atau pihak pengurusan
- Membuat keputusan mengenai hal-hal yang berkaitan dengan pengoperasian penggahar
- Memulakan usaha untuk memperkenalkan prosedur kerja/pemantauan baru yang ditambahbaik di dalam pengoperasian penggahar

Sila ambil perhatian bahawa pemeriksa laporan ingin melihat sumbangan anda kepada usaha penambahbaikan yang telah dibuat di dalam aspek pemantauan prestasi penggahar dan kejayaan pengoperasian penggahar di premis anda secara keseluruhan.

Laporan latihan di lapangan boleh ditulis dalam Bahasa Malaysia atau Bahasa Inggeris.

Jika anda mempunyai sebarang pertanyaan teknikal mengenai penyediaan laporan latihan di lapangan, sila berhubung dengan:

Mohd Hidzir bin Bakar – alamat emel: mhb@doe.gov.my; nombor telefon : 03-89267625 atau

Farah Diyana bt Rusli -alamat emel: farahdiyana @doe.gov.my; nombor telefon : 03-89267611

Untuk maklumat am mengenai CEPBO, sila berhubung dengan:

En Aminuddin Ishak- alamat emel: ai@doe.gov.my; nombor telefon: 03-89267904 atau

Wan Khairuldin Wan Ismail- alamat emel: (Khairuldin@doe.gov.my; nombor telefon: 03-89267693

Jawatankuasa Kompetensi
Environmental Institute of Malaysia (EiMAS)
25 Ogos 2009

Sham/ceps0-2009-08-19

**CERTIFIED ENVIRONMENTAL PROFESSIONAL IN SCRUBBER
OPERATION (CEPSO)
FIELD TRAINING REPORT PREPARATION**

IMPORTANT REMINDER

Throughout the field work/training report you must clearly identify where you were involved in the following processes/activities

- Conducting measurements of performance monitoring data and conduct measurement using portable equipment.
- Preparing performance monitoring report and presenting it to the scrubber performance monitoring committee or management
- Making decision on scrubber operation matters
- Initiating efforts to introduce new/improved work or monitoring procedure in scrubber operation

Please bear in mind that the report examiner is looking for your contribution to the overall improvement efforts that have been made in the aspect of scrubber performance monitoring and the overall successful operation of the scrubber in your premise.

The field training report can be written in Bahasa Malaysia or in English.

If you have any technical questions regarding the field training report preparation, please email your questions to the following:

Mohd Hidzir bin Bakar- email address: mhb@doe.gov.my; telephone number: 03-89267625 or

Farah Diyana bt Rusli- email address: farahdiyana@doe.gov.my; telephone number: 03-89267611

For any general questions about CEPBO, please contact the following:

En Aminuddin Ishak- email address: ai@doe.gov.my; telephone number: 03-89267904 or

Wan Khairuldin Wan Ismail email address: (Khairuldin@doe.gov.my); telephone number: 03-89267693

Competency Committee
Environmental Institute of Malaysia (EIMAS)

August 25, 2009

Sham/cepietso-2009-08-19

CERTIFIED ENVIRONMENTAL PROFESSIONAL IN SCRUBBER OPERATION (CEPSO)

EXPLANATORY NOTES ON THE PREPARATION OF FIELD TRAINING REPORT

1. Introduction

In partial fulfillment of the requirements for the Certificate of Certified Environmental Professional in Scrubber Operation (CEPSO), the candidates are required to undergo field training on operating and maintaining a scrubber system at their work place for a minimum of six (6) months and submit the report on field training to the following:

The Director
Environment Institute of Malaysia (EiMAS)
Department of Environment
Universiti Kebangsaan Malaysia
Locked Bag No. 24
43600 BANGI, SELANGOR

2. Report Specification and Format

A substantial component of the field training should comprise hands on experience in operating and maintaining a scrubber system where the theory and understanding that the candidate has acquired in the CEPSO course organised by EiMAS are translated into practice at the work place. The field training report should follow the general specification and format as below:

2.1 Specification

Covers and Binding

The report should be bound preferably in hard cover

Typeface to be used is Arial

Front Cover of the report should follow the example given in Appendix A.

Language of Report

Report may be written in English or Bahasa Malaysia

Typeface and Font Size of the Main Text

Typeface to be used is Arial. Font size of 12 point should be used for the main body of the text.

Margins and Spacing

The margin on the document must comply with the specifications below:

Top – 20 mm

Bottom – 40 mm

Left – 40 mm

Right – 25 mm

Text

Text should be: **typed one side** of the paper only, **one and a half-spaced, left-right justified**. For captions of figures and tables, single spaces can be used.

Pagination

Every page except the title page must be **numbered**; **PRELIMINARY PAGES** are to be numbered in **lower case Roman numerals** (i, ii, iii etc); and **MAIN TEXT** pages are to be numbered at the center of the page (1, 2, 3..) and all pages must be numbered **consecutively** and **continuously**.

2.2 Format

The structure of the report is based on standard format which contains the following sections:

A. Preliminary Pages

B. Main Text

C. Appendices

The report should contain a minimum of 15 pages (excluding executive summary, illustrations, photographs, appendices, or figures).

Photographs should be printed in **COLOR** .

A. PRELIMINARY PAGES

The preliminary pages shall include at least the following:

a. General information on the candidate

1. Name of Candidate:

.....

2. Contact Address:

.....

.....

.....

3. Designation:

.....

4. Nature of Business:

Indicate the type of your organization, whether a consulting company or a manufacturing industry. If your company is a manufacturing industry, you should provide the following information:

Type of manufacturing:

.....
.....
.....

Others please specify:

.....
.....

5. Date of attending the course on Certified Environmental Professional In Scrubber Operation conducted by the Environment Institute of Malaysia (E/MAS):

.....

6. Name and address of the premise where you underwent the field training on operating and maintaining a scrubber system.

i) Name:.....

ii) Address:.....

.....
.....

7. Period of Field Training:

.....

8. Contact officer in the above organization who could verify your training experience:

Name:.....

Designation:.....

Phone number:.....

Fax number:.....

E-mail address:.....

b. Verification (to be filled out by the candidate's supervisor)

"I hereby declare that (Mr/Ms).....has completed the six months field training as required and the information provided in the report is true to my best knowledge"

Name of Supervisor:..... NRIC number:

Designation :.....

Signature: Date:

Company's stamp:

c. Declaration (to be filled out by the trainee)

“I declare that the entire report is the product of my own work and all the facts stated in it and the accompanying information are true and correct and that I have not withheld or distorted any material facts”

Name of Candidate:..... NRIC number:

Designation :.....

Signature: Date:

Company's stamp:

(Note:

The verification and declaration must be type written using the official letterhead of the company where the candidate is attached to)

B. MAIN TEXT

The main text or body of your report shall include at least the following chapters.

CHAPTER 1: INTRODUCTION

1.1 Background of Company or Industry

In this subchapter you should explain the nature of manufacturing carried out in your factory and the products manufactured or the nature activity carried out in your company.

1.2 Organization's environmental commitment

1.2.1 Company's or industry's environmental policy

In this subchapter, at the minimum you should reproduce an extract of your company's/industry's Environmental Policy. Mention the date the policy was made and identify whether the policy is an existing policy or a new policy which has been developed. If it is a new policy, explain how and where you were involved in its development.

1.2.2 Emplacement and Functions of CEPSO (Competent Environmental Profesional in Scrubber Operation)

In this subchapter, you should show an organizational structure where you as a CEPSO are placed. Provide a certified copy of your list of duties where it shows the scrubber performance monitoring function is one of your core duties.

CHAPTER 2: PERFORMANCE MONITORING OF SCRUBBER SYSTEM

2.1 Description of Scrubber

In this subchapter you should briefly describe the type of scrubber systems on your premise (eg. packed tower, venturi, tray, orifice, cyclonic, centrifugal etc.). Provide also scrubber technical data which at least includes;

- Dimension of scrubber
- Type of scrubber
- Capacity of scrubber
- Type of packing
- Scrubbing solution
- Scrubber operational data- pressure drop across scrubber/mist eliminator, pH of liquor, gas loading, liquid loading, motor running amp fan speed, etc.
- Building layout showing location of the scrubber system

2.2 Scrubber performance monitoring committee

In this subchapter you should show an organizational management structure where you as a CEPSCO would report regularly to a permanent committee which would monitor and subsequently report to higher management on the scrubber performance. Explain if you were involved in the formation of the committee after attending the CEPSCO course organized by EiMAS.

2.3 Conduct of Performance Monitoring

2.3.1 Situation Before Course Attendance

In this subchapter, you should describe how the scrubber system was being monitored before you attended the CEPSCO course and improvement/changes were made.

2.3.2 Changes Instituted

In this subchapter, you should describe how and what changes were made through your efforts or intervention to the way how performance

monitoring of the scrubber system is conducted in your premise to be in line with the procedure taught in the CEPSCO course at EiMAS and the Guidance Document on Performance Monitoring of Air Pollution Control Systems – DOE – APCS – 5, 2006.

2.3.3 Current 'Performance Monitoring Procedure

In this subchapter, you should describe in detail how performance monitoring of the scrubber system is being conducted after the changes you proposed, were accepted and implemented in your premise.

CHAPTER 3: CORRECTIVE ACTIONS

In this chapter you should describe the details of major upset conditions encountered, if any, during the operation of scrubber system for the duration of this training report. You should include the date of the occurrence, nature of upset conditions and the corrective actions taken by you.

CHAPTER 4: FURTHER IMPROVEMENT

In this chapter, you should describe future efforts, if any, to be initiated by you to further ensure smooth running of the scrubber system on a sustained basis.

CHAPTER 5: CONCLUSIONS

In this chapter, you should make some conclusions on the overall performance of your scrubber system and discuss how performance monitoring procedure has benefited your company or industry.

Produce in the appendix:

Appendix I

A list of measuring equipment used for performance monitoring

Apendiks II

Maintenance record of the scrubber system.

Appendix III

Daily, weekly and monthly scrubber performance monitoring record

Appendix IV

An example of a Scrubber Performance Monitoring Report submitted by you to the Scrubber Performance Monitoring Committee

References

Competency Committee
DOE Headquarters
August 19, 2009

Sham/CEPIETSO-19 Ogos, 2009

BAB 1: PENGENALAN

1.1 Latarbelakang Syarikat atau Industri

Di bab ini tuan hendaklah menerangkan jenis pengeluaran yang dijalankan di kilang tuan dan produk yang dihasilkan, atau jenis aktiviti yang dijalankan di syarikat tuan.

1.2 Komitment Organisasi Kepada Alam Sekitar

1.2.1 Polisi alam sekitar syarikat atau industri

Di bab ini, sekurang-kurangnya tuan hendaklah menyediakan ekstrak Polisi Alam Sekitar syarikat/industri tuan. Nyatakan tarikh polisi ini dibuat dan kenalpasti sama ada ianya polisi sedia ada atau polisi baru. Sekiranya ia polisi baru, terangkan bagaimana dan di mana tuan telah terlibat dalam penyediaannya.

1.2.2 Kedudukan dan fungsi CEPESO (Competent Environment Profesional in Scrubber Operations)

Di bab ini, kemukakan struktur organisasi untuk menunjukkan di mana tuan sebagai seorang CEPESO ditempatkan. Kemukakan juga salinan

senarai tugas tuan yang disahkan yang menunjukkan fungsi pengawasan prestasi sistem penggahar sebagai salah satu tugas utama tuan.

BAB 2: PENGAWASAN PRESTASI SISTEM PENGGAHAR

2.1 Penerangan Penggahar

Di bab ini tuan hendaklah menerangkan secara ringkas jenis sistem penggahar di premis tuan (contoh turus terpadat, venturi, dulang, orifis, siklon, empar dan dsb.). Kemukakan juga data teknikal penggahar dimana sekurang-kurangnya termasuk;

- Dimensi penggahar
- Jenis penggahar
- Keupayaan penggahar
- Jenis pemadat
- Cecair penggahar
- Data operasi penggahar (perbezaan tekanan penggahar/demister, pH operasi, bebanan gas, bebanan cecair, ampere motor; kelajuan kipas; dsb.)
- Susunatur bangunan menunjukkan lokasi sistem penggahar

2.2 Jawatankuasa pengawasan prestasi penggahar

Di bab ini tuan hendaklah menunjukkan struktur pengurusan di mana tuan sebagai CEPSCO akan membuat laporan secara berkala kepada sebuah jawatankuasa tetap yang akan memonitor dan seterusnya melapor kepada pengurusan atasan mengenai prestasi penggahar. Terangkan bagaimana tuan terlibat di dalam pembentukan Jawatankuasa ini setelah menghadiri kursus CEPSCO yang dianjurkan oleh EIMAS.

2.3 Menjalankan pengawasan prestasi

2.3.1 Keadaan sebelum kursus

Di bab ini tuan hendaklah menerangkan bagaimana penggahar di monitor sebelum tuan menghadiri kursus CEPSCO dan penambahbaikan/perubahan dibuat.

2.3.2 Perubahan yang dilakukan

Di bab ini tuan hendaklah menerangkan bagaimana dan apa perubahan yang dilakukan melalui usaha dan intervensi tuan mengenai cara pengawasan prestasi penggahar dijalankan di premis tuan supaya ianya selaras dengan prosedur yang diajar di dalam kursus CEPSCO di EiMAS dan garis panduan Guidance Document on Performance Monitoring of Air Pollution Control Systems – DOE – APCS – 5, 2006.

2.3.3 Prosedur pemantauan prestasi pada masa kini

Di bab ini tuan hendaklah menerangkan secara detil bagaimana pengawasan prestasi penggahar dijalankan setelah perubahan yang dicadangkan diterima dan dilaksanakan di premis tuan.

BAB 3: TINDAKAN PEMBETULAN

Di bab ini tuan hendaklah menerangkan butir-butir kejadian tidak menentu (*upset conditions*) yang ketara yang dihadapi, jika ada, semasa pengoperasian sistem penggahar dalam tempoh pelaporan dibuat. Tuan hendaklah menyatakan tarikh kejadian, jenis kejadian 'upset' dan tindakan pembetulan yang telah diambil oleh tuan.

BAB 4: PENAMBAHBAIKAN SELANJUTNYA

Di bab ini tuan hendaklah menerangkan usaha di masa hadapan; jika ada, yang akan diambil oleh tuan untuk memastikan sistem penggahar dapat beroperasi dedngan lebih baik pada sepanjang masa.

BAB 5: KESIMPULAN

Di bab ini tuan hendaklah membuat kesimpulan tentang prestasi sistem penggahar secara am dan membincang bagaimana pengawasan prestasi telah memberi manfaat kepada syarikat atau industri tuan.

Kemukakan di dalam Apendiks.

Apendiks I

Senarai peralatan untuk pengukuran pengawasan prestasi.

Apendiks II

Rekod penyelenggaraan sistem penggahar.

Apendiks III

Rekod pengawasan prestasi harian, mingguan dan bulanan penggahar

Apendiks IV

Contoh laporan pengawasan prestasi sistem penggahar yang telah dikemukakan kepada Jawatankuasa Pemantauan Prestasi Penggahar.

Rujukan

Jawatankuasa Kompetensi
Ibu Pejabat Jabatan Alam Sekitar
19 Ogos 2009

CONTOH LAPORAN LATIHAN DI LAPANGAN

**PROFESIONAL ALAM SEKITAR DISAHKAN DALAM PENGOPERASIAN
SISTEM PENGAHAR (CEPSO)**

LAPORAN LATIHAN DI LAPANGAN

Dikemukakan kepada

Pengarah
Institut Alam Sekitar Malaysia (EiMAS)
Kampus Universiti Kebangsaan Malaysia
Beg Berkunci No. 24
43600 BANGI, Selangor

Oleh

Abdul Rahim bin Abdul Rahman
Nombor Kad Pengenalan:.....
September 30, 2009

Memenuhi Sebahagian daripada Syarat untuk
Sijil Profesional Alam Sekitar yang disahkan dalam
Pengoperasian Sistem Pengahar

EXAMPLE OF FIELD TRAINING REPORT

**CERTIFIED ENVIRONMENTAL PROFESSIONAL IN SCRUBBER
OPERATION**

FIELD TRAINING REPORT

Submitted to

The Director
Environment Institute of Malaysia (EiMAS)
Department of Environment
Universiti Kebangsaan Malaysia Campus
Locked Bag No 24
43600 BANGI, Selangor

By

Abdul Rahim bin Abdul Rahman
Identity Card number:
September 30, 2009

In Partial Fulfillment of the Requirement for the Certificate of Certified
Environmental Professional in Scrubber Operation (CEPSO)

MAKLUMAT AM MENGENAI CALON
CANDIDATE'S GENERAL INFORMATION

- Nama:
Name:
Abdul Rahim Bin Abdul Rahman

- Alamat:
Address:

No. 25,.....
Johor Darul Takzim

- Jawatan:
Designation:

Penyelia Sistem Penggahar
Scrubber System Supervisor

- Tarikh menghadiri kursus Certified Environmental Professional in
Scrubber Operation (CEPSO) di EiMAS:
○ Date attending Certified Environmental Professional in Scrubber
Operation (CEPSO) course at EiMAS:

20 – 25 Julai 2009
20 – 25 July 2009

- Nama dan alamat syarikat di mana tuan telah menjalankan latihan di
lapangan mengenai pengawasan prestasi penggahar:
○ Name and address of company that you had field training on scrubber
performance monitoring:

ABC Beverage Sdn. Bhd
Johor Bahru
Johor Darul Takzim

- Jenis pengeluaran:
○ Type of manufacturing:

Membuat minuman
Beverage manufacture

- Tempoh latihan di lapangan untuk laporan ini

- Period of field training for this report

Ogos 2009 – Februari 2010
August 2009 – February 2010

- Pegawai industri untuk tujuan verifikasi
- Contact officer from the industry for purpose of verification

Nama:
Name: Ismail bin Husin
Jawatan: Pengurus Utiliti
Designation: Utilities Manager
Nombor telefon: 019-.....
Phone Nounber: 019-.....
Alamat emel: ih@yahoo.com
e-mail address: ih@yahoo.com

VERIFIKASI

Dengan ini saya sahkan bahawa EN. ABDUL RAHIM BIN ABDUL RAHMAN telah menjalani latihan di lapangan sebagaimana yang diperlukan dan maklumat yang dikemukakan di dalam laopran ini adalah benar sepanjang pengetahuan saya.

Nama: ISMAIL BINHUSIN
Nombor kad pengenalan: 463343...
Jawatan: Pengurus Utiliti
Nombor telefon: 019-2123911
Alamat e-mel: ih@yahoo.com
Tandatangan:
Tarikh: 1 Mac, 2010

VERIFICATION

I hereby verify that MR. ABDUL RAHIM BIN ABDUL RAHMAN has completed the field training as required and the information provided in this report is true to my best knowledge.

Name: ISMAIL BINHUSIN
I/C NO: 463343...
Designation: Utilities Manager
Phone no: 019-2123911
E-mail address: ih@yahoo.com
Signature:
Date: March 1, 2010

DEKLARASI

Saya mengaku bahawa laporan ini keseluruhannya adalah hasil usaha saya sendiri dan semua fakta yang terkandung di dalamnya serta maklumat yang disertakan adalah betul dan benar dan saya tidak menyembunyikan atau memutarbelitkan mana-mana fakta.

Nama: ABDUL RAHIM BIN ABDUL RAHMAN

Nombor kad pengenalan : 463343...

Jawatan: Penyelia Sistem Penggahar

DECLARATION

I declare that the entire report is the product of my own work and all the facts stated in it and the accompanying information are true and correct and I have not withheld or distorted any material fact.

Name: ABDUL RAHIM BIN ABDUL RAHMAN

I/C NO: 4633437

Designation: Scrubber Supervisor

Signature:

Date: March 1, 2010

Isi Kandungan	
Maklumat am calon	i
Verifikasi	iii
Deklerasi	iv
Isi kandungan	v
Singkatan	vi

Bab 1: Pengenalan

- 1.1 Latarbelakang industri/syarikat
- 1.2 Komitmen organisasi kepada alam sekitar

Bab 2: Pengawasan prestasi sistem penggahar

- 2.1 Penerangan mengenai penggahar
- 2.2 Jawatankuasa pengawasan prestasi penggahar
- 2.3 Menjalankan pengawasan prestasi

Bab 3: Tindakan pembedahan

- 3.1 Kes 1
- 3.2 Kes 2

Bab 4: Penambahbaikan selanjutnya

Bab 5: Kesimpulan

Apendiks I

Senarai peralatan untuk pengukuran pengawasan prestasi.

Apendiks II

Rekod penyelenggaraan sistem penggahar.

Apendiks III

Rekod pengawasan prestasi harian, mingguan dan bulanan penggahar

Apendiks IV

Contoh laporan pengawasan prestasi sistem penggahar yang telah dikemukakan kepada Jawatankuasa Pemantauan Prestasi Penggahar.

Rujukan

Table of Contents

General information on the candidate	i
Verification	iii
Declaration	iv
Table of contents	v
Nomenclature/Abbreviation	vi

Chapter 1: Introduction

- 1.1 Background of industry/company
- 1.2 Organization's environmental commitment

Chapter 2: Performance Monitoring of Scrubber System.

- 2.1 Description of Scrubber
- 2.2 Scrubber performance monitoring committee
- 2.3 Conduct of performance monitoring

Chapter 3: Corrective Actions

- 3.1 Case 1
- 3.2 Case 2

Chapter 4: Further Improvement

Chapter 5: Conclusions

Appendices

Appendix I

A list of measuring equipment used for performance monitoring

Appendiks II

Maintenance record of scrubber system.

Appendix III

Daily, weekly and monthly scrubber performance monitoring record

Appendix IV

An example of a Scrubber Performance Monitoring Report submitted by you to the Scrubber Performance Monitoring Committee

References

