NIOSH Malaysia Newsletter... bringing you the OSH updates

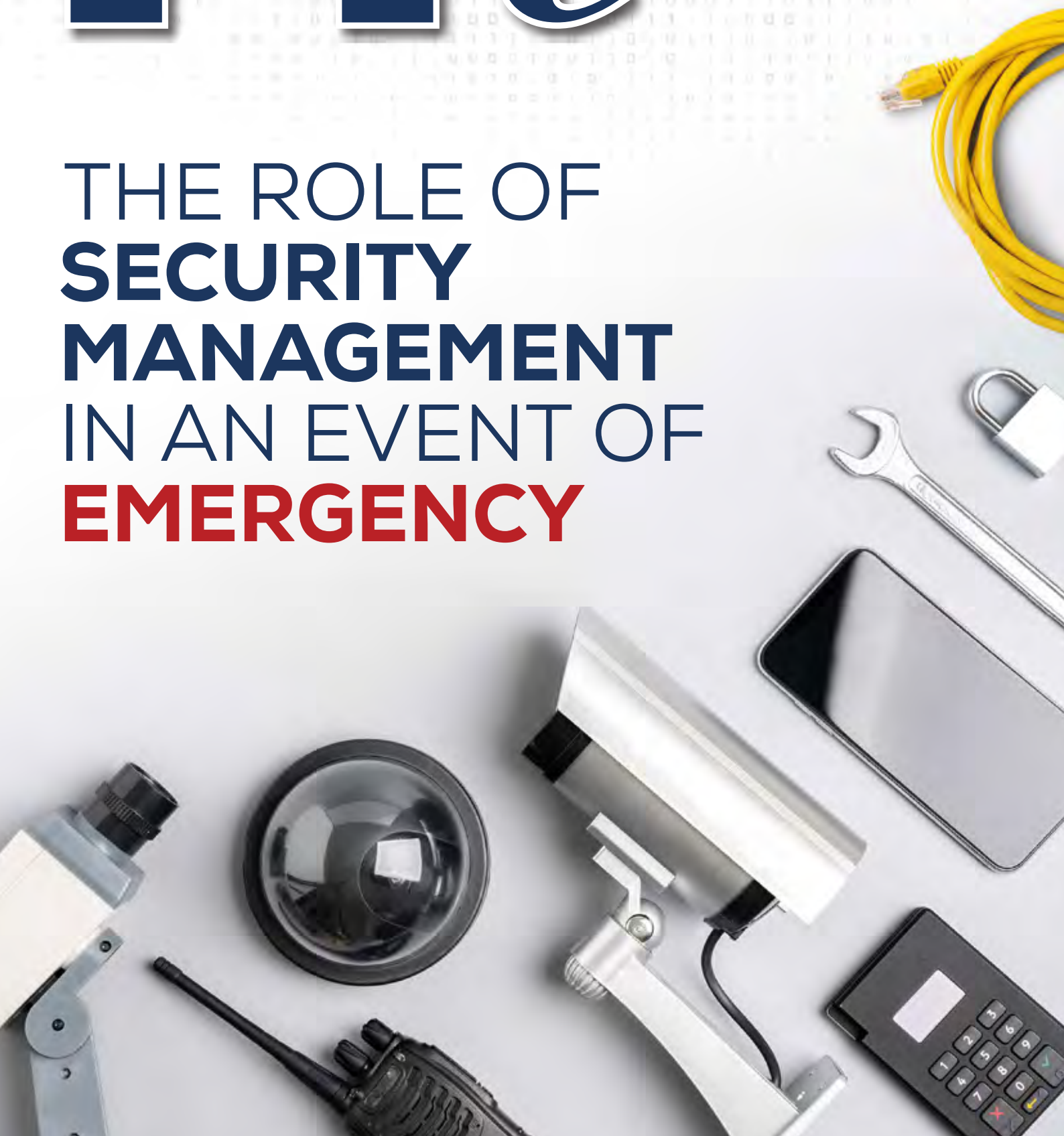
FYi

NIOSH
National Institute Of Occupational Safety And Health

January 2021
ISSN 1675-5464

Your OSH preferred partner

THE ROLE OF **SECURITY MANAGEMENT** IN AN EVENT OF **EMERGENCY**



EXECUTIVE DIRECTOR'S **NOTE**

Dear reader,

As far as we are concerned that the year of 2020 was the year like no other in the past that have caused a huge difference as for the current year of 2021 shall begin with plentiful inquiries concerning what lies ahead. Whilst we are caught between a pandemic that is still ravaging many parts of the world, but yet promising the post-pandemic world with the launch of several attested COVID-19 vaccines. The beginning of a new year has filled the nation with hope and optimism than usual when the vaccines are cleared for use in Malaysia. As it is known COVID-19 vaccines is not a cure for the virus, but the immunity against COVID-19 helps in lowering the overall amount of virus able to transmit in the entire population. It is estimated to be at least two years duration for a large percentage of the world's population to be immunized and vaccinated. This will be a year not just for reckoning the influential impact of COVID-19, but rather for the foresight on what will unfold in 2021.

For us, NIOSH, our goal is to open a "new chapter" by 2021 with enthusiasm and commitment to ensure that the inclusive values of occupational safety and health can be disseminated through various channels.

Last but not least, I would like to thank the staff of NIOSH, members of NIOSH and all industry players. Thank you for all your wonderful contributions towards the growth and success of NIOSH to drive the Occupational Safety and Health (OSH) in our nation. We set our sights on prioritizing our clients at the heart of everything we do and we sincerely thank all our clients, the long-term and new clients with us, for your trust, great support and your excellent cooperation with us.

See you next month!

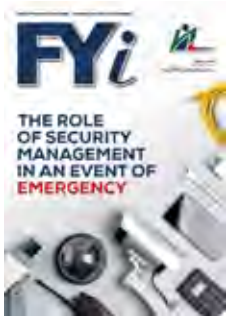
Haji Ayop Salleh
Executive Director,
NIOSH

TABLE OF **CONTENTS**

The Role of Security Management in an event of Emergency	3 - 5
20% Off OSH Consultation Service	6
Keselamatan Kebakaran	7
Simple Checklist to Stay Safe & Healthy Online	8
Capaian atas talian dari sebarang peranti untuk bahan rujukan anda berkaitan Keselamatan & Kesihatan Pekerjaan (KKP)	9
Type of Sensors in a Gas Detector	10
OSH Talk	11
Seminar atas Talian	12
Temuramah bersama Pengerusi NIOSH di Astro Awani / Program *Kick Off E-Idaman Safety Passport*	13
Misi Bantuan Bencana di Daerah Mersing, Johor	14
Ucapan Selamat Tahun Baru 2021	15
Forensic Engineering Laboratory (FEL)	16

EDITORIAL TEAM

January 2021
eISSN 2762-7412



ADVISORS

Haji Ayop Salleh
Major Haji Hanif Maidin (Rtd)

EDITORS & WRITERS

Ts. Haji Shahronizam Noordin
Roslina Md Husin
Joy Khong Chooi Yee
Mohd Razman Ismail

ADVERTISING & MEDIA SALES

Mohd Hussin Abd Salam
bmd@niosh.com.my
Ranjitha A/P Bala

PUBLISHER

NIOSH
Lot 1, Jalan 15/1, Section 15,
43650 Bandar Baru Bangi,
Selangor Darul Ehsan, Malaysia.

Tel : 03-8769 2100
Fax : 03-8926 2900
Email : general@niosh.com.my
Website : www.niosh.com.my

Sila imbas **Kod QR** ini untuk memberi maklum balas penerbitan NIOSH

THE ROLE OF **SECURITY MANAGEMENT** IN AN EVENT OF **EMERGENCY**

MOHD RAZMAN BIN ISMAIL
RESIDENT TRAINER, NIOSH

Introduction

In the event of an emergency, action was taken by the authorities must be quick and precise to ensure the condition is not escalated and could bring more damage. The main focus of the emergency response is not only for the safety and health of the workers, but also on the security of the assets involved in the event such as building, facilities, products, information, company secret and etc. That is why security management is very important to be implemented to prepare for any potential crisis. The security measure usually includes all parties, especially the government when dealing with the crisis on a wider scale. The action should be taken to prevent any potential of deliberate harm and acknowledge the source of danger and intention towards the country or organization. Post 9/11 terrorist attacks saw an increase of security awareness and prevention measure are taken especially in the aviation industry and the so-called government anti-terrorist group to ensure the incident would never happen again. (Comfort, 2005). During an emergency, every part of the organization would come together as a team to confront and control the incident to avoid the adverse effect and preventing the situation from getting worse. The national emergency network will be activated, mobilize and respected parties such as police, fire department, hospital and other voluntary organization will carry out their designated task. (Waugh & Sylves, 2017). This will also include the security management team. The roles of security management in an event of an emergency are as below:

1) Safeguarding Information

Information protection requires confidentiality and integrity to be protected while ensuring the availability and accessibility of information through safety, security, authentication, and ethical conduct. Confidentiality requires prohibiting the disclosure to unauthorized individuals of information. The integrity of information means that any data could not be modified without anyone being able to detect its alteration. Accessibility of information means that information must be available when it is needed.

By offering physical and administrative controls, only those personnel with special needs and authorization have the access to the information. This practice will foster an ethical awareness of the importance of the information to everyone concerned with the sensitivity and safety of the information. To safeguard the information, organizations should establish plans and Standard Operating Procedures (SOPs). The implementation of a comprehensive information safety plan includes a process to determine the importance, vulnerability, and the danger of the information.

The information has a lot of influence on many things and has huge impacts on the economy and business. (Buera & Kaboski, 2012). Nowadays, information has evolved and become the paramount business assets and could be a game-changer factor in the competitive commerce world. (Ahmad et al., 2014).

Many security breaches may emerge from insufficient protection of information and data properties. These breaches of security against business information assets have led to integrity problems and, for others, tarnish the organization's reputation. (Arlitsch & Edelman, 2014). That is why, when an emergency happens, the integrity of the sensitive information must be well protected to avoid any security breach that may lead to information and data leakage.

THE ROLE OF SECURITY MANAGEMENT IN AN EVENT OF EMERGENCY

2) Safeguarding Facilities

Critical industries often become a target to the theft of terrorist groups to get advantages from a certain country they invaded. During an emergency, the condition could get worse and without proper security management, the opportunist could strike and do whatever they want. The industries such as mining, water treatment plant, explosive, chemical manufacturing must have the integrated security management system to protect them from any possible threat. They must come up with the action plan to face any scenario such as successfully attack the facilities and also the consequences that will happen after the attack. The security management system must be able to repel the attack and protect the facilities at all cause to avoid any unwanted incident that could lead to more damage and loss. Good facilities and asset management must have three basic elements which are:

i) All critical facilities and assets are accounted for;

ii) All critical facilities and assets have an assigned owner responsible for protecting and maintaining the availability of the assets; and

iii) Details of every facilities and asset information are classified to ensure the selection of appropriate safeguards and avoiding security breach.

There are many ways to help to safeguard the facilities during an emergency, such as the implementation of Eye in The Sky system or better known as CCTV to constantly monitor the situation at the ground zero. The cameras and surveying systems could be placed throughout the facilities that will send a signal or alarm to the security personnel mobile device if there is a problem or security breach happens. A research conducted by Welsh in 2009 shows that the decrease in crime rate to the astonishing 51 % when CCTV was installed at the strategic places in the public car park. (Welsh et al., 2009). This finding suggested that CCTV or Eye in The Sky could help the security personnel to safeguard the facilities even more effective.

Access to the area of the facilities could be controlled by using the access or smart card that issued to the authorized and also security personnel. Every time they use the cards, the data will be collected automatically, for instance, the identification document (ID) of the card owner, the location, time in and also time out. This will allow the security management team to monitor and identify the movement of their staff and at the same time will help them to establish control within their facilities especially during an emergency. Through the advancement of Information Technology, the access card will act as the main tools to maintain security within the facilities. (Fang et al., 2013)

3) Providing a Platform for Training and Competencies

Training and competencies are the two most important aspects in ensuring the personnel who may be dealing with the emergency to prepare themselves and function properly. Lack of competencies and useful training could prolong the response time and create unnecessary risk to the rescuer as well as the victims. When planning for an emergency, the group of workers should be well trained and educated to ensure they are well informed and able to act during an emergency. Training session or a briefing can be in the classroom, online, on the job, or via a combination of methods.

All security personnel must undergo a training session to ensure they understand and able to fulfil their duty as competent security personnel. In Malaysia, they must attend the training supervised by Polis Diraja Malaysia. On the other hand, they also have to attend other soft skill training which could help them to become a better part of their company. For example, if they are working in an oil and gas plant, the company could be providing them with Basic Occupational First Aid (BOFA) and Basic Fire Fighting course to ensure the security personnel could help and respond properly during any event of an emergency.

The training is important due to the concern that the human factor is always the weakest link in any system involving humans. Thus, training will enhance the knowledge and skill of the workers and security personnel. (Mccrohan et al., 2010).

THE ROLE OF SECURITY MANAGEMENT IN AN EVENT OF EMERGENCY

Conclusion

Although safety and security have a different definition and connotation, but both of it has the same paramount objective which is to guarantee the safety, health and welfare of the workers and also the facilities and assets in their working area. The implementation of the highly effective security management system will ensure the safety and security of the facilities and assets, thus will not bring any potential harm to the workers or as we all know the so-called "unsafe condition". During an emergency, the function of the security management will become more crucial in order to establish the security of the compound itself and the safety of the workers through a designated evacuation plan.

References

Ahmad, A., Bosua, R., & Scheepers, R. (2014). Protecting Organizational Competitive Advantage: A Knowledge Leakage Perspective. *Computers & Security, 42,* 27–39. https://doi.org/10.1016/j.cose.2014.01.001

Arlitsch, K., & Edelman, A. (2014). *Staying Safe : Cyber Security for People and Organizations. December,* 37–41. https://doi.org/10.1080/01930826.2014.893116

Buera, B. F. J., & Kaboski, J. P. (2012). *The Rise of the Service Economy. 102(6),* 2540–2569.

Comfort, L. K. (2005). Risk, security, and disaster management. *Annual Review of Political Science, 8,* 335–356. https://doi.org/10.1146/annurev.polisci.8.081404.075608

Fang, Yongsheng; Gang, Hong; Chen, Y. (2013). Construction of Information Security System for the Campus Card System. *Information, 16(2),* 1015–1018.

Mccrohan, K. F., Engel, K., & Harvey, J. W. (2010). Influence of Awareness and Training on Cyber Security Influence of Awareness and Training on Cyber Security. *Journal of Internet Commerce, 9,* 37–41. https://doi.org/10.1080/15332861.2010.487415

Waugh, W. L., & Sylves, R. T. (2017). Organizing the war on terrorism. *War on Terrorism, 385(2003),* 273–281. https://doi.org/10.4324/9781315234403-19

Welsh, B. C., Farrington, D. P., Welsh, B. C., & Farrington, D. P. (2009). *Public Area CCTV and Crime Prevention : An Updated Systematic Review and Meta - Analysis Public Area CCTV and Crime Prevention : An Updated Systematic Review and Meta-Analysis. November 2014, 37–41*. https://doi.org/10.1080/07418820802506206

Info

20% off of NIOSH OSH consultation services, complemented with Workplace Improvement Needs Analysis (WINA). This offer valid from January 2021 to June 2021.

What is WINA?

WINA is a method to gather the necessary information to perform a baseline or gap analysis and analyze the current OSH implementation status and practice in the workplace and propose the organizational need for OSH improvement programs. It will be a short assessment to assure, as far as practicable, that all OSH issues are identified to be assessed and prioritized for further actions. During the session, NIOSH will assess the current situation and implementation of OSH in your organization.

The assessment will cover:

i. Documentation review;
ii. Workplace Inspection; and
iii. Structured interview (with related parties).

Benefits of WINA?

You will get a copy of a report which consists of the assessment findings and recommendations on OSH workplace solutions. This will be a good reference in planning the required / necessary OSH programs suitable for your business activities! Please fill up the online form at

http://forms.gle/n7wnBd1sgsq2mJud9

and we will arrange a quick visit to your workplace.
For further inquiries, please do not hesitate to contact us at **013-2228155** or via email **cmc@niosh.com.my**

Info

KESELAMATAN KEBAKARAN

Apa yang perlu dilakukan sekiranya berhadapan dengan kecemasan (api)?

1 Lawan atau Lari?

Sekiranya terlatih untuk memadam kebakaran, gunakan alat pemadam api yang bersesuaian. Sekiranya tidak, segera tinggalkan kawasan dengan selamat menuju ke tempat berkumpul.

2 Aktifkan Penggera Kebakaran

Maklumkan kepada orang lain di sekitar dan aktifkan penggera kebakaran yang tersedia di kawasan tersebut.

3 Gunakan tangga/ laluan kecemasan

Gunakan tangga/ laluan kecemasan yang berdekatan untuk keluar dari bangunan. Jangan sesekali menggunakan lif. Bergerak dengan tenang dan jangan berlari.

4 Hubungi bantuan kecemasan

Hubungi talian kecemasan 999 atau balai bomba berdekatan untuk mendapatkan bantuan. Tunggu sehingga bantuan tiba di lokasi dan jangan masuk semula ke dalam bangunan.

Tahukah anda?

Mengikut statistik Jabatan Bomba dan Penyelamat Malaysia, peningkatan kadar kebakaran di negara ini sangat ketara apabila sebanyak **36,758** panggilan kebakaran dicatatkan pada tahun 2018 berbanding 28,853 panggilan pada 2017. Manakala, **97** kematian telah dicatatkan & Kerugian akibat kebakaran pula mencecah **RM3.3 bilion** (Tahun 2018).

TATACARA PENGGUNAAN ALAT PEMADAM API

Cara Pemadaman

Rujukan:

1. *Laporan Tahunan Jabatan Bomba dan Penyelamat Malaysia 2018*
2. *NIOSH Emergency Preparedness and Response Module*
3. *NIOSH Safety and Health Officer Module*

Perlukan khidmat rundingan membangunkan dan menambahbaik prosedur kecemasan? Menubuhkan Pasukan Tindakan Kecemasan (ERT)? atau melaksanakan kawad kecemasan? Hubungi kami di...

Jabatan Perundingan, Penyelidikan dan Pembangunan (CRD), NIOSH (243042-U)
Lot 1, Jalan 15/1, Section 15, 43650 Bandar Baru Bangi, Selangor.
Tel: 03-87692100 Fax: 03-89113800
Website: www.niosh.com.my

Info

SIMPLE CHECKLIST TO **STAY SAFE & HEALTHY ONLINE**

Flexible working and learning opportunities can benefit everyone; employers, employees and their families. Stay safe and healthy wherever you are.

Safety

- [ ] Indoor vs outdoor location
- [ ] Avoid noise & electrical hazards
- [ ] Avoid slip, trip & fall hazards

Health

- [ ] Screen distance & duration
- [ ] Sitting posture
- [ ] Avoid COVID-19 exposure

Mental

- [ ] Working hours
- [ ] Mood
- [ ] Distraction

Hardware

- [ ] Desktop / laptop / mobile phone / tablet
- [ ] Printer, mouse & keyboard
- [ ] Speaker / headphone

Software

- [ ] Microsoft Office
- [ ] Microsoft Teams / Google Meet / Zoom
- [ ] Data security

Network

- [ ] Stable & reliable internet
- [ ] Connection speed issues
- [ ] Poor signal issues

Info

Capaian atas talian dari sebarang peranti untuk bahan rujukan anda berkaitan **Keselamatan & Kesihatan Pekerjaan (KKP)**

Komputer Riba

- √ Kalendar latihan 2021
- √ Pilihan latihan atas atas talian
- √ Pilihan seminar atas talian (webinar)

Komputer

- √ Senarai rujukan program latihan KKP: kelayakan, objektif, yuran & acara

Tablet

- √ Pertanyaan atas talian (*online chat*)
- √ Semakan keputusan peperiksaan / penilaian

Telefon Bimbit

- √ Video KKP
- √ Jurnal KKP
- √ e-Bulletin KKP
- √ e-Book KKP

Segalanya ada di
www.niosh.com.my

Info

TYPES OF **SENSORS** IN A **GAS DETECTOR**

Know your sensors! Know your needs!

NIOSH Gas Detector Calibration Laboratory (GCL) was established in 2015 and accredited with ISO/IEC 17025 Competence of Testing and Calibration (Field of Electrical Testing) in 2016. At present GCL is part of OSH Evaluation & Control Technology Centre (OSHECT) under NIOSH Malaysia. We at GCL are commited in providing certified yet affordable gas detector calibration services to our customers as well as advisory services on appropriate usage, maintenance and storage of the instruments.

For more information, please visit us at:

GAS DETECTOR CALIBRATION LABORATORY (GCL), OSHECT, NIOSH MALAYSIA
Lot 1, Jalan 15/1, Section 15,
43650 Bandar Baru Bangi, Selangor.
Tel : 03-8796 2258
Whatsapp : 013-222 8155
Email : cmc@niosh.com.my
: muhammad.akmal@niosh.com.my

STANDARDS MALAYSIA ACCREDITED
SAMM 412

GCL, NIOSH accredited since 2015

Catalytic

Cat EX or combustible sensor oxidizes a combustible gas and converts the temperature change into an electrical signal.
Eg. Combustible gas: Methane, Propane, Hydrogen

Electrochemical

Measures the concentration of a target gas of oxidizing or reducing it. The electrical current output is measured by the electrode.
Eg. Oxygen / Toxic gases

Infrared

Measures trace gases by determining the absorption of an emitted infrared light source through an air sample.
Eg. Carbon Dioxide / Combustible gases

Photo-ionization

Breaks molecules into positive and negative charge ions and measures the electrical charge of these ions using a detector to display the amount of gas or vapor that is present.
Eg. Volatile Organic Vapour (VOCs) / Toxic gases

Aktiviti

AKTIVITI SECARA ATAS TALIAN SEPANJANG PERINTAH KAWALAN PERGERAKAN (PKP) 2021

OSH TALK

NIOSH telah membawa perkongsian secara atas talian *OSH Talk* di Facebook NIOSH (FB *Live*). *OSH Talk* ini berlangsung pada **27 Januari 2021** (Rabu), jam 11.00 pagi hingga 12.00 tengah hari. *OSH Talk* tersebut disampaikan oleh Muhammad Azra Azmy, *Head of Fire Division* dari *Academy of Safety and Emergency Care (ASEC)*. Topik yang dibicarakan pada pagi tersebut bertajuk *Home Fire Safety During PKP: Possibility of Fire at Home.*

NIOSH telah membawa perkongsian secara atas talian *OSH Talk* di Facebook NIOSH (FB *Live*). *OSH Talk* ini berlangsung pada **21 Januari 2021** (Khamis), jam 11.00 pagi hingga 12.00 tengah hari. *OSH Talk* tersebut disampaikan oleh Ts Haji Shahronizam Noordin, Pengurus Bahagian Penyebaran Maklumat (IDD), NIOSH. Topik yang dibicarakan pada pagi tersebut bertajuk *Competency Framework : Confined Space Competent Person.*

NIOSH telah membawa perkongsian secara atas talian *OSH Talk* di Facebook NIOSH (FB *Live*). *OSH Talk* ini berlangsung pada **7 Januari 2021** (Khamis), jam 11.00 pagi hingga 12.00 tengah hari. *OSH Talk* tersebut disampaikan oleh Indra Imus, *Resident Trainer, NIOSH Sabah Regional Office.* Topik yang dibicarakan pada pagi tersebut bertajuk *Basic Water Safety: The Danger is Real.*

NIOSH telah membawa perkongsian secara atas talian (webinar) *OSH Talk* bersama pelajar Universiti Malaysia Terengganu (UMT). *OSH Talk* ini berlangsung pada **6 Januari 2021** (Rabu), jam 9.30 hingga 11.00 pagi. *OSH Talk* tersebut disampaikan oleh Ahmad Aizuddin Ahmad Ridzwan, NIOSH SHO *Trainer*. Topik yang dikongsi pada pagi itu bertajuk *Occupational Safety and Health Management Systems (OSHMS).*

Aktiviti

AKTIVITI SECARA ATAS TALIAN SEPANJANG PERINTAH KAWALAN PERGERAKAN (PKP) 2021

SEMINAR ATAS TALIAN

NIOSH telah membawa perkongsian Seminar atas talian (*Online Seminar*) yang berlangsung pada **30 Januari 2021** (Sabtu), 10.00 hingga 12.30 tengah hari. Seminar bertajuk "Pematuhan kepada Akta KKP 1994 Berkaitan Langkah-Langkah Pencegahan Terhadap Infeksi COVID-19 di Tempat Kerja" telah disampaikan oleh Mohd Yusri Bin Mohd Yusof , OSH *Consultant/ Trainer/Lecturer.*

NIOSH telah membawa perkongsian secara atas talian seminar (Webinar) yang berlangsung pada **26 Januari 2021** (Selasa), jam 8.30 pagi hingga 5.30 petang. Seminar secara atas talian tersebut disampaikan oleh Ir. Nimi Ahmad, *OSH Consultant/ Lecturer/Trainer.* Topik yang dibicarakan pada hari tersebut bertajuk "Sistem Pengurusan Keselamatan Dan Kesihatan Pekerjaan (KKP)".

Sesi pengisian ilmu secara 'virtual' yang amat bermanfaat ini adalah bagi memperkukuhkan pengetahuan asas tentang Akta KKP 1994, HIRARC dan OSHMS bersama tenaga pengajar yang sangat berpengalaman.

NIOSH telah membawa perkongsian Seminar atas talian (*Online Seminar*) di Facebook NIOSH (FB *Live*) yang berlangsung pada **25 Januari 2021** (Isnin), 10.00 hingga 11.00 pagi. Seminar bertajuk *Planning on OSH Training in Pandemic Times* telah disampaikan oleh Ruzita Mohd Shariff, Pakar Teknikal, Jabatan Pendidikan & Latihan NIOSH Malaysia.

Aktiviti

TEMURAMAH BERSAMA PENGERUSI NIOSH DI ASTRO AWANI

Pada **22 Januari 2021**, pukul 1.43 petang telah berlangsung temuramah Pengerusi NIOSH di Astro Awani berkaitan masalah kesihatan mental. Pengerusi Institut Keselamatan dan Kesihatan Pekerjaan Kebangsaan (NIOSH) iaitu Datuk Wilson Ugak Kumbong ditemuramah dengan memberi fokus kepada keselamatan pekerja ketika mana bekerja dari rumah atau *Work from Home (WFH)* sedang dilaksanakan secara besar-besaran di seluruh negara.

#NormaBaharu #DisiplinMalaysia #HapusCOVID19

PROGRAM *KICK OFF MEETING E-IDAMAN SAFETY PASSPORT*

Terima kasih atas penglibatan dari *Business and Marketing Division (BMD), Education & Training Department & Regional Office (ETD-RO)* dan *Northern Regional Office (NRO).*

Aktiviti

MISI BANTUAN BENCANA DI DAERAH MERSING, JOHOR

Rombongan Kementerian Sumber Manusia yang diketuai oleh YB Menteri Sumber Manusia di Lawatan Kerja sempena Misi Bantuan Bencana bagi Daerah Mersing, Johor. Misi Bantuan Bencana ke lima buah Pusat Pemindahan Sementara (PPS) ini melibatkan 85 buah keluarga yang rumah mereka dinaiki air banjir, serta bersama-sama 122 orang petugas.

PPS yang terlibat adalah PPS Politeknik Mersing, PPS Sekolah Kebangsaan Air Tawar, PPS Sekolah Kebangsaan Labong, PPS Sekolah Kebangsaan Bandar Endau, PPS Sekolah Kebangsaan Teriang.

NIOSH turut sama dalam program ini dalam membantu memberikan sumbangan bagi meringankan beban para mangsa dan keluarga yang terkesan.

Semoga penduduk Mersing tabah melalui ujian dari Allah SWT ini.

NIOSH
National Institute Of Occupational Safety And Health

Bersama kita memperkasa keselamatan dan kesihatan di tempat kerja.

Selamat Tahun Baru 2021

FORENSIC ENGINEERING LABORATORY

INTRODUCTION

Under the Eleventh Malaysia Plan (11th MP), NIOSH Malaysia has been funded by the Government of Malaysia (Ministry of Human Resources) to develop the **Forensic Engineering Laboratory (FEL)** as part of the OSH Hazard Evaluation and Control Technology Centre (OSHECT).

FEL has the capability to:

1. analyze scientific evidence collected from the accident site or vice versa;
2. prepare technical report by NIOSH technical expert based on the scientific evidence;
3. provide basic engineering workshop safety; and
4. produce prototype for pre-commercialization purposes or research.

FEL SERVICES

Through micro investigation, by combining engineering, scientific and technical approach based on international standard (ASME, ANSI, EN & BS), FEL provide:

Microscopic Examination
- Evaluation of fracture surfaces

Metallographic/ Metallurgical Analysis
- Examination of porosity, cracks, grain size, segregation & distribution of phase

Mechanical Test (Vickers Hardness Test)
- Measurement of sample hardness value

3D Prototype Printing
- Fabrication of prototype

FEL FACILITIES

Engineering Workshop
- Raw sample/evidence received to be cut and sectioned prior to analysis.
- Provides basic cutting, grinding and welding activities.

Material Preparation & Analysis
- Sample will undergo few processes of microscope examination, metallography examination & mechanical test.

3D Rapid Prototyping
- Prototype to be fabricated in order to study the root cause of failures: structure, material, machine or component.

References:

1. Buehler Summet – A Guide to Material Preparation & Analysis
2. NIOSH Forensic Engineering Laboratory Brochure
3. NIOSH Malaysia Newsletter – FYi

"You Have Curiosity? We Help Solve the Mystery"

Contact us at:
Forensic Engineering Laboratory (FEL),
OSH Hazard Evaluation and Control Technology Centre (OSHECT), NIOSH (243042-U)
Lot 1, Jalan 15/1, Section 15, 43650 Bandar Baru Bangi, Selangor
Tel: 03-87692100 (Ext.: 1111) / Fax: 03-89115900
Website: www.niosh.com.my

Disclaimer

©Copyright 2021. National Institute of Occupational Safety and Health Malaysia. All rights reserved. No part of this publication can be reproduced, store in retrievel system, or transcribe in any forms or by any means, electronic, photocopying, or otherwise, without the prior written permission of the copyright owner. Facts and opinions in articles published on FYi are solely the personal statements of respective authors. Authors are responsible for all contents in their articles including accuracy of the facts, statements, citing resources and so on.

NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH MALAYSIA (NIOSH)
Institut Keselamatan & Kesihatan Pekerjaan Negara (243042-U)
Kementerian Sumber Manusia
Lot 1, Jalan 15/1, Seksyen 15, 43650 Bandar Baru Bangi, Selangor Darul Ehsan
Tel: 03-8769 2100 Fax: 03-8926 5655
www.niosh.com.my