



VISHAY SEMICONDUCTOR MALAYSIA SDN. BHD.  
No. 1710-1, Kawasan Perindustrian Krubong,  
75250 Melaka.  
Tel : 06 – 331 5365  
Fax : 06 – 331 5363

# SOHELP VISHAY



**SOHELP**  
Systematic Occupational Health  
Enhancement Level Programme

A **WORLD OF**  
**SOLUTIONS**



**Dr. Gunalan Paramasevam, Ph.D**  
**43 years Old – Married – 2 children**  
***Senior Manager of IEHS & Security***  
**Vishay Semiconductor Malaysia Sdn Bhd.**

**National University of Malaysia**  
***Bachelor Degree – First Class Honours***  
***Applied Chemistry***

**Universiti Putra Malaysia**  
***Master Degree - Distinction***  
***Masters of Environmental Management***

**University of Basel, Switzerland**  
***Doctorate of Philosophy - Distinction***  
***Environmental Engineering***

**Stanford University, US**  
***Master Degree - Distinction***  
***Masters of Business Administration***

***Harvard Business School (Online)***  
***Management***

**Experience:**

**CCM, Siemens, Infineon, Vishay, ESI Consultancy, Alam Flora, Perodua,  
Total (Qatar), Monument Gold Mining.**

**Competency:**

**Associate Chemist, Registered SHO, Competent Auditor ISO 14001 & OHSAS  
18001, EICC Auditor, First Aider, etc**



**19 Years**

***Facilities and EHS Management***

**Pharmaceutical, Semiconductor,  
Mining, Oil & Gas, Construction,  
Automotive, Solid Waste  
Management and EHS Management  
Systems Consultancy**

**Managing People and  
EHS Systems in  
multicultural environment  
worldwide**





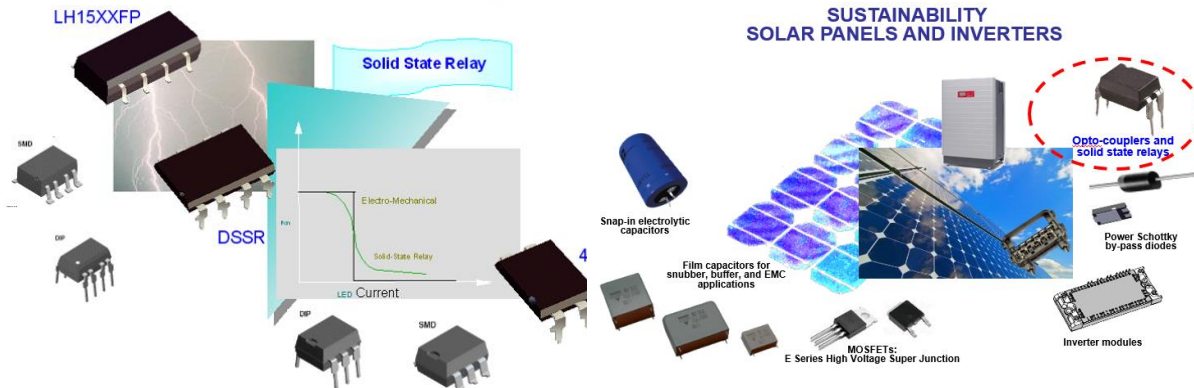
# VISHAY SEMICONDUCTOR MALAYSIA

NO 1710-1 KAWASAN PERINDUSTRIAN KRUBONG 75252, KRUBONG MELAKA



## Application

- Telecommunications
- Computers & peripherals
- Instruments & Systems
- Industrial Control

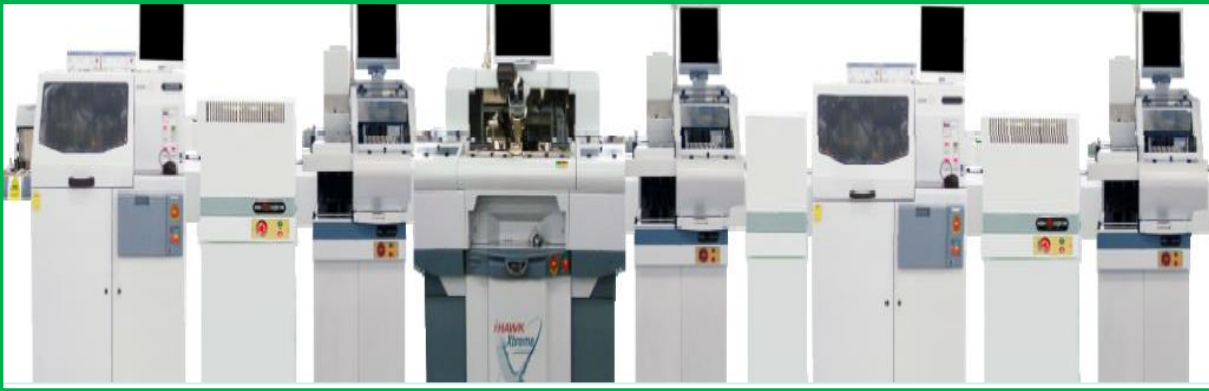


CAPACITORS • DIODES • INDUCTORS • MOSFETs • OPTOELECTRONICS • RESISTORS

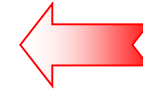


# Coupler/SSR / Sensor

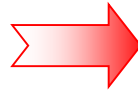
## *Manufacturing Process Flow*



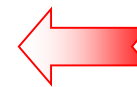
Front Of Line (Linked)  
Die, Snap Cure, Wire  
Bond & Junction Coating



End Of Line Encapsulation  
Auto-Molding



Test Operation  
Test, Mark and  
Taping







Dr. Gunalan Paramasevam -SHO



AD HOC SOHELP TEAM

## BORANG PERSETUJUAN PENYERTAAN PROGRAM INTERVENSI SOHELP

Dengan ini saya, NG CHEE HUI  
 selaku PENGURUS BESAR di VISHAY SEMICONDUCTOR  
MALAYSIA SDN BHD bersetuju / tidak bersetuju\* untuk menyertai  
 Program Intervensi SOHELP.

Pihak syarikat juga bersetuju untuk melantik penama berikut sebagai orang yang bertanggungjawab untuk melaksanakan program ini:

Bil.	Nama	No. KP	Jawatan
1.	DR. GUNALAN A/L PARAMASEVAM	720409-05-5273	SR. MANAGER, IEHS & SECURITY
2.	D. KANAGARAJAH A/L T. DURAIAPPAN	590612-04-5203	IEHS EXECUTIVE

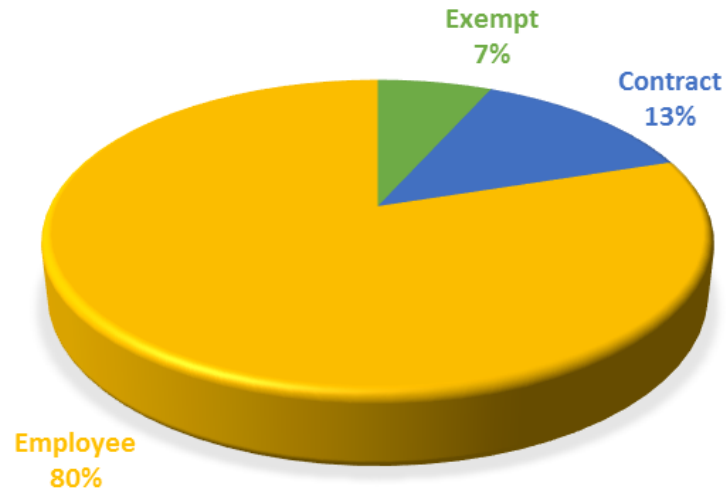
Sekian, terima kasih.





# BENEFIT FROM SOHELP PROGRAM

## SOHELP BENIFITED TO VISHAY

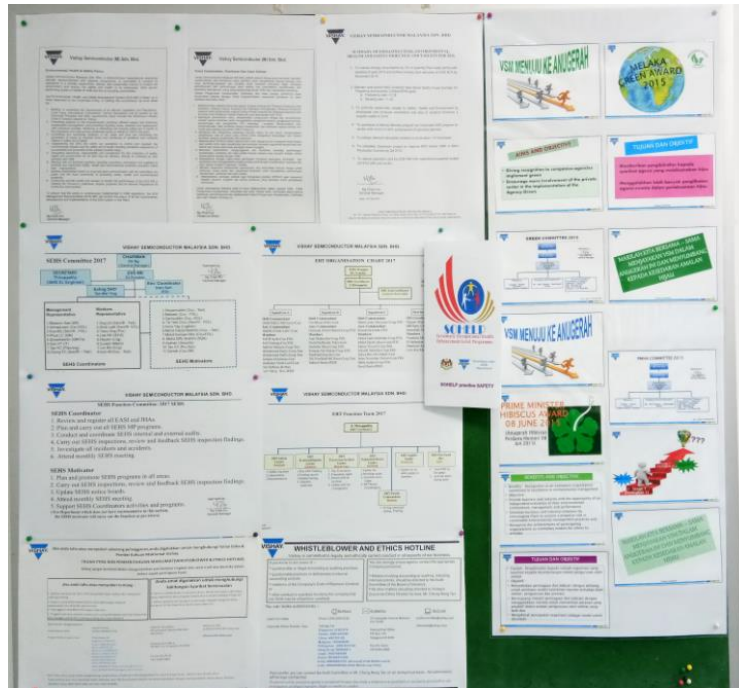






# PROMOTING SOHELP AT VISHAY SEMICONDUCTOR

## VSM SLOGAN : SOHELP practice SAFETY



SOHELP Notice board

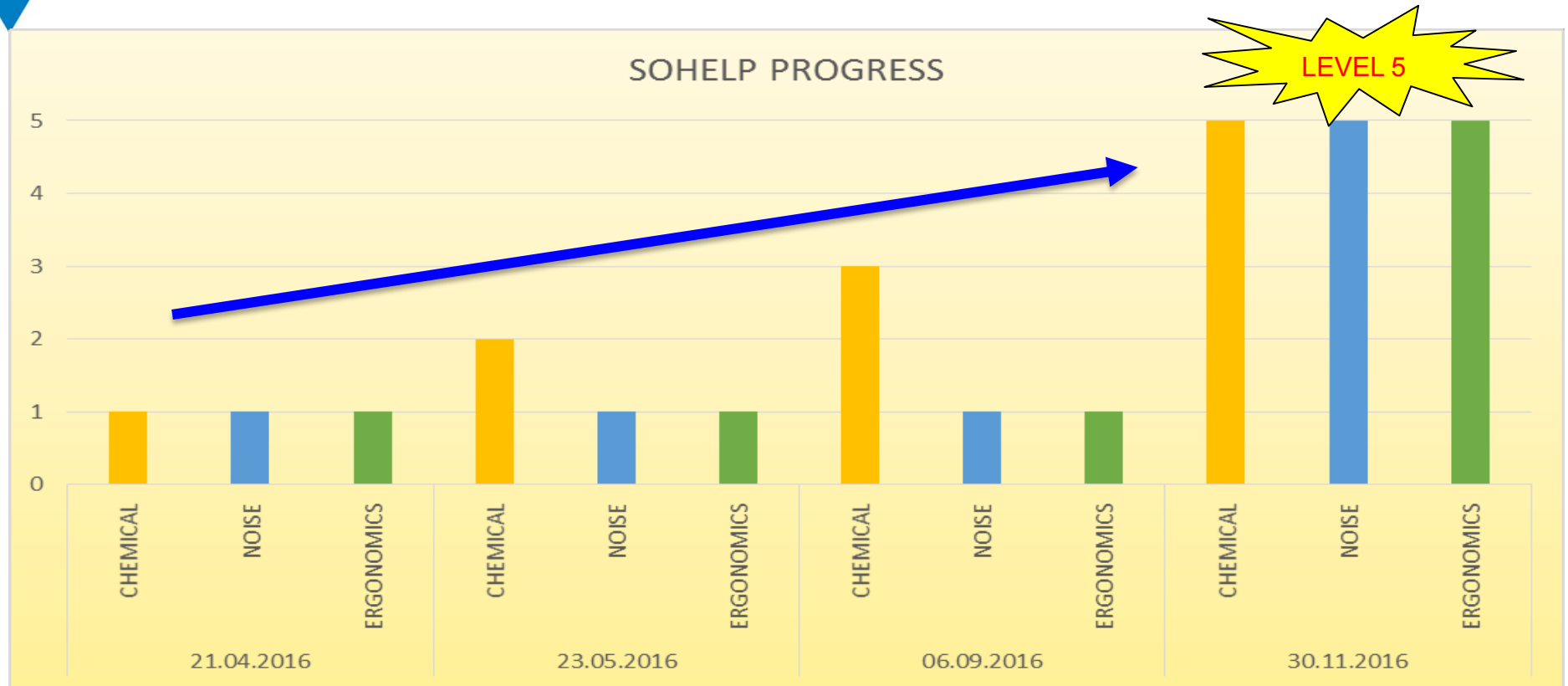


Canteen TV display

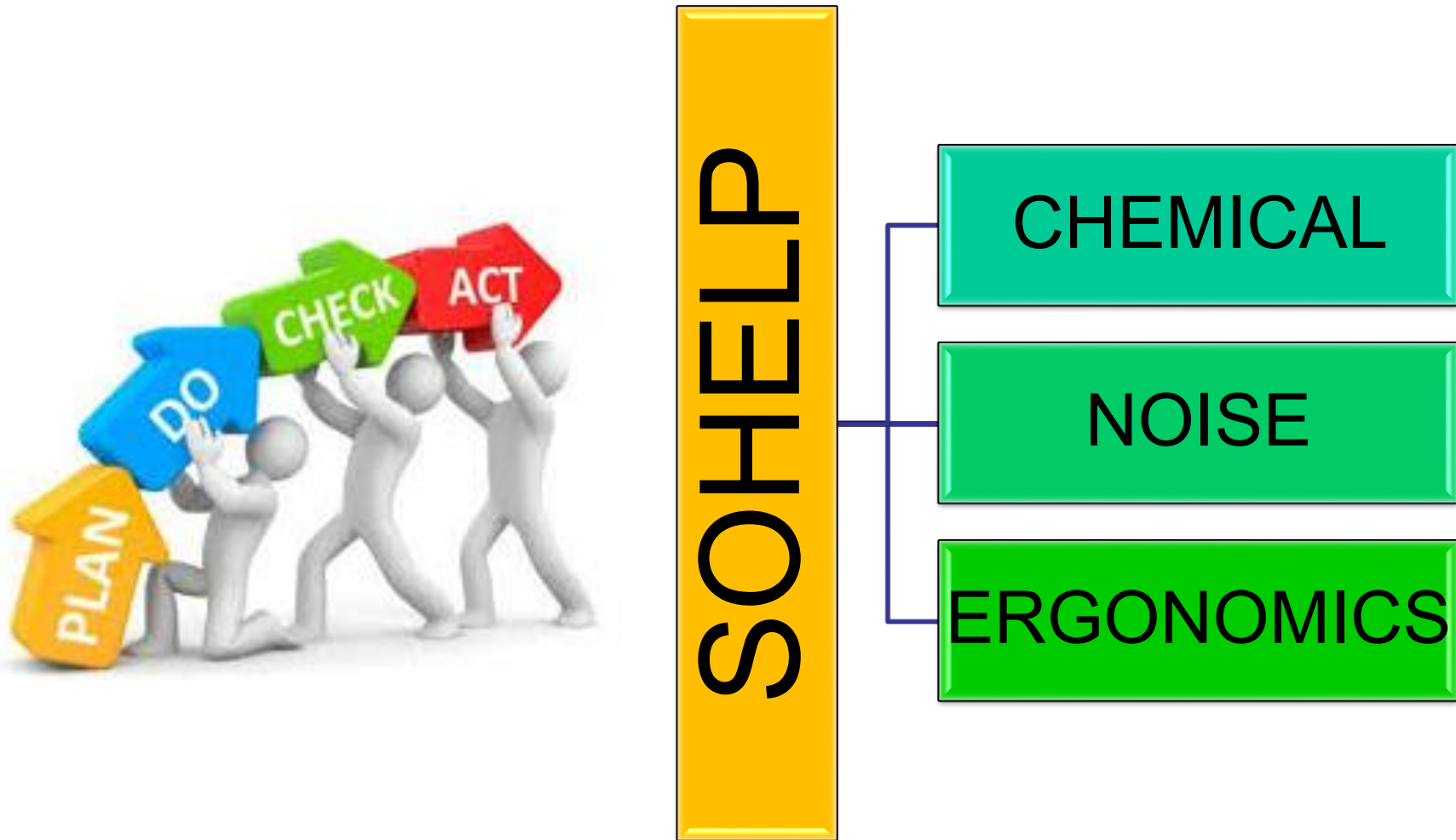


SOHELP brocher

# SOHELP PROGRESS AUDIT 2016

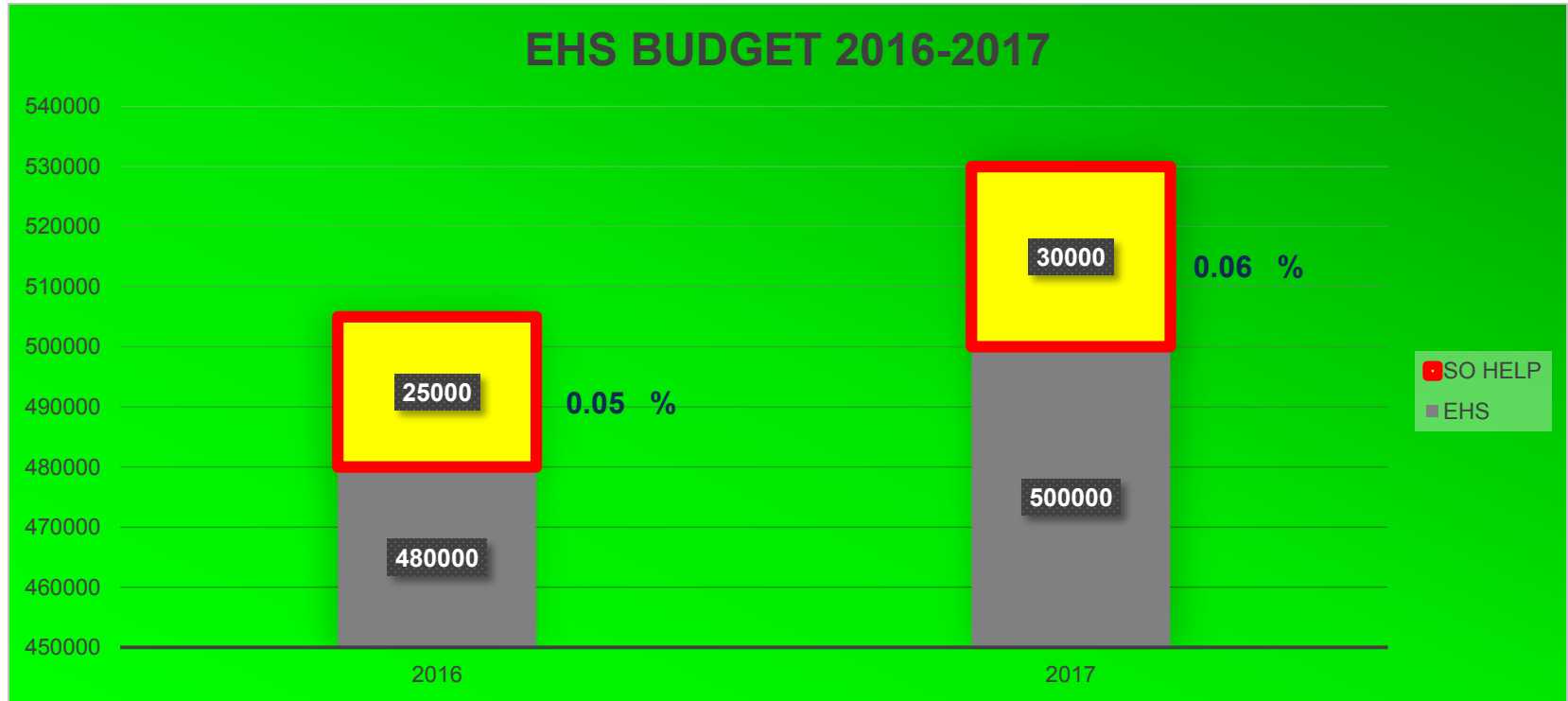






**VSM SLOGAN : SOHELP practice SAFETY**

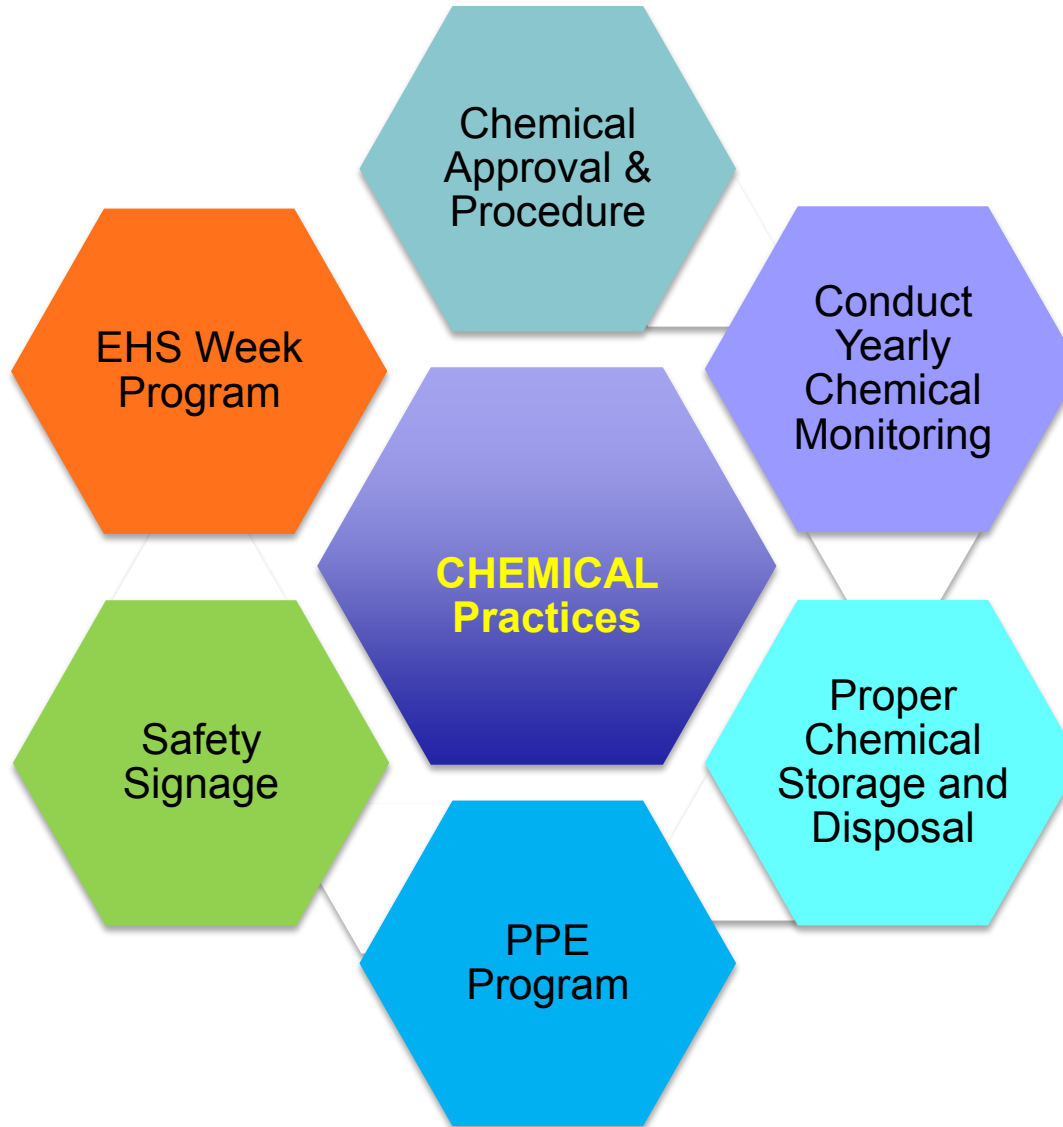
# TOP MANAGEMENT COMMITMENT







**EHS week**



**Yearly Chemical Monitoring**



**Safety Signage**



**Proper Chemical Storage and Disposal**

BEFORE



AFTER





## BEFORE



Chemical training without hand on chemical spillage

## AFTER



Chemical training with hand on chemical spill

## CHEMICAL IMPROVEMENT : REDUCE CONSUMPTION OF CHEMICAL

**BEFORE**



Chemical dynasolve were used for metal mold cleaning process

**AFTER**



Dry ice



Reduce consumption of chemical by using dry ice machine for metal mold cleaning process. Less manual handling

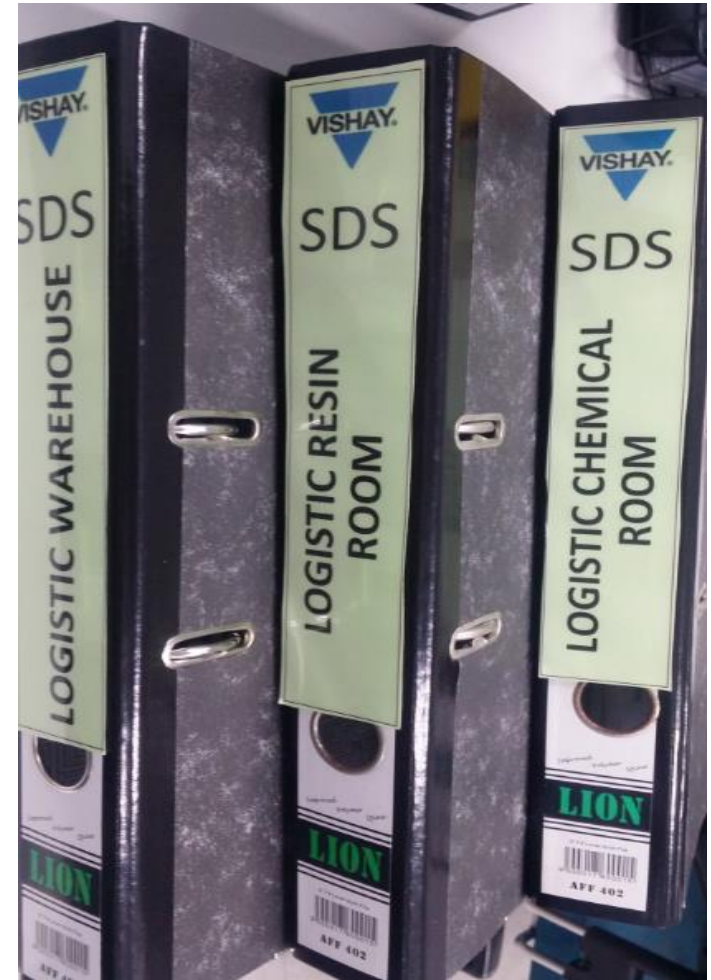


## BEFORE

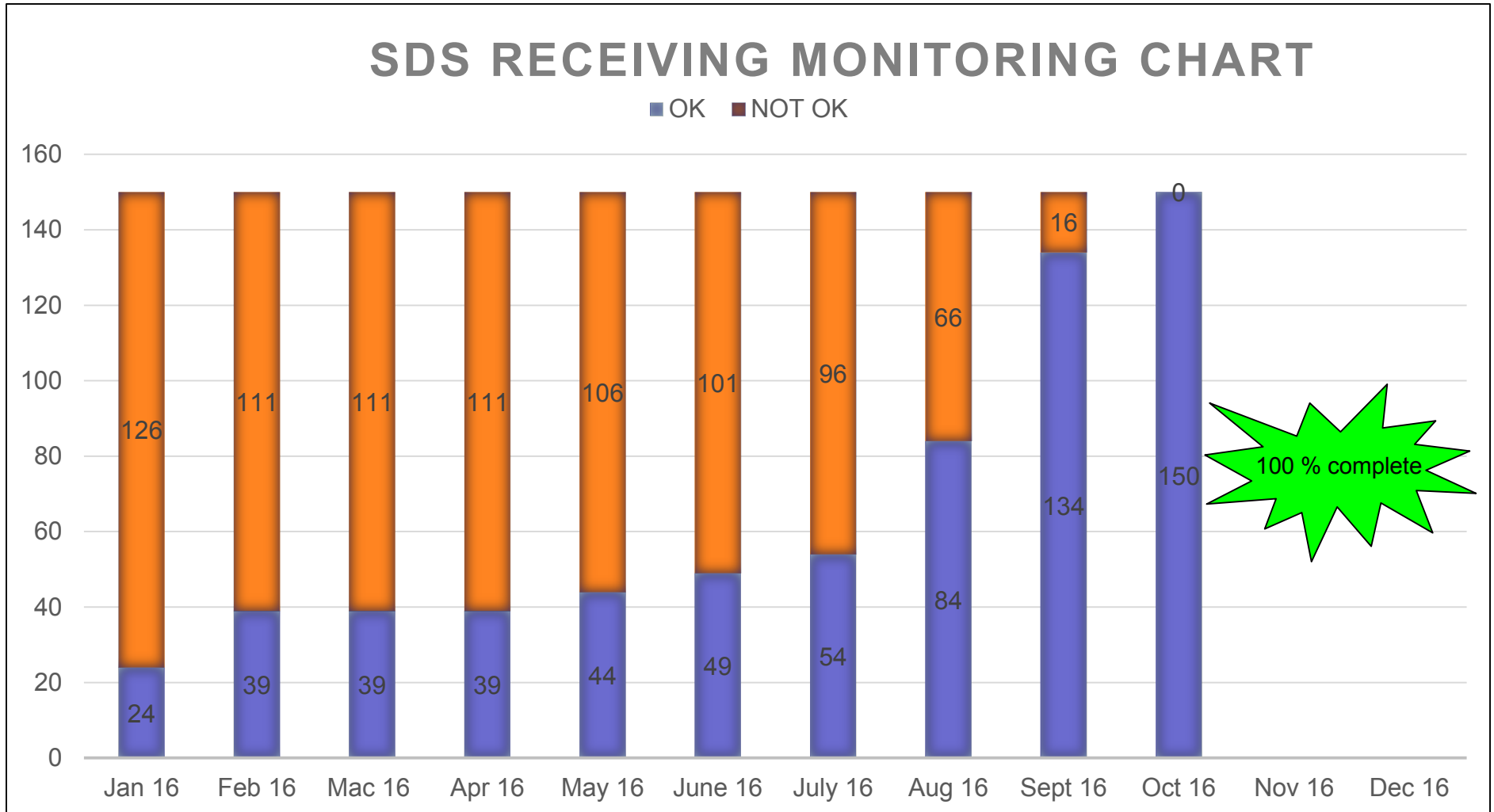


Chemical safety data sheet not follow CLASS regulation 2013

## AFTER



Review chemical master list and request supplier for Latest SDS compliance to CLASS Regulation 2013



## BEFORE

No synchronize system for material safety data sheet information

Establish new centralize system to ease early information for safety data sheet – Advantage for new employee

## AFTER

**New chemical register form**

Process Operation :

No.	Department Used	Group	Product Name
1	Carbide		Concentrated form 100%
2	Long Chain Room		
3	QM Reliability		
4	Preventive Maint		
5	Reliability	GS/004	Isopropyl Alcohol
6	QM Initial		
7	Sensor Test		
8	Complex PDS		

**Summary of SDS in BM – early information**

**IPA (ISOPROPYL ALCOHOL)**

**Bahaya**

**LANGKAH LANGKAH PENYELIDIKAN (SDS)**

**SDS DETAIL**

**Folder SDS details – BM & BI version**

File	Date Modified	Type	Size
(K) SDS_IPA, IPHLL_IPA, 2023.pdf	7/25/2024 9:54 AM	Adobe Acrobat Fi...	2,946 KB
(K) SDS_IPA, IPHLL_IPA, 2023.pdf	7/25/2024 10:01 AM	Adobe Acrobat Fi...	2,959 KB

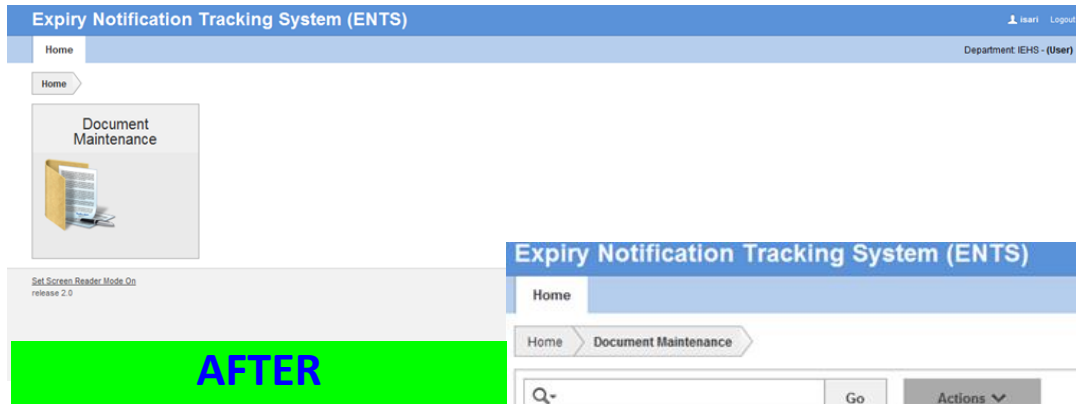




# CHEMICAL IMPROVEMENT : EXPIRY NOTIFICATION TRACKING SYSTEM

## BEFORE

No reminder on expiry date of report submission, eg SDS, Permits, License & Others



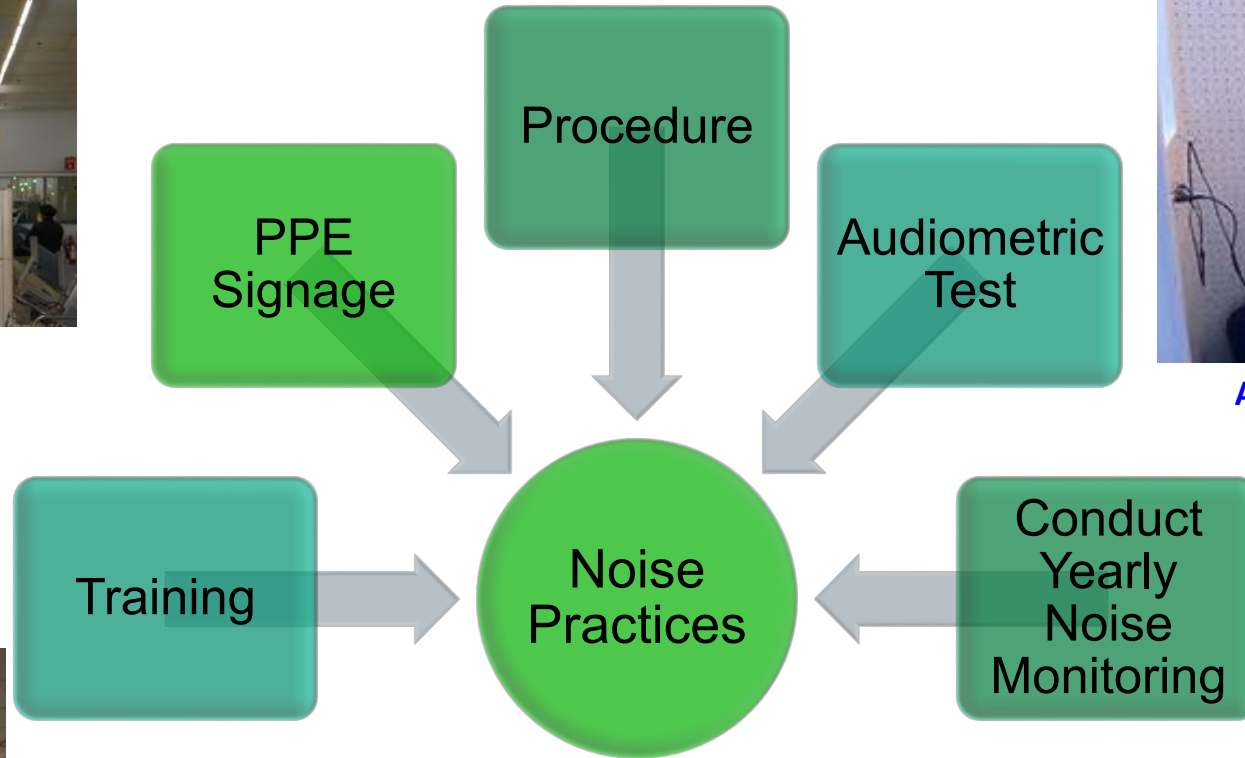
Establish ENTS Software to set reminder between internal and external parties to remind the expiry date of report

Expiry Notification Tracking System (ENTS)									
Home Department: IEHS - (User)									
Home Document Maintenance									
Q- Go Actions Add Document									
Suspended Active									
Action	Document Name	Document Desc	Document Type	Weekly Notification	Notification Leadtime	Notification Start Date	Due Date	Department	Status
<a href="#">Edit</a>	MBMB License	MBMB license have been expired on 31.12.2016. Please submit MBMB 2017 license	Licenses	Yes	15	16-Jan-2017	31-Jan-2017	IEHS	ACTIVE
<a href="#">Edit</a>	Best Lindevest License	Your license for 'lesen pembentungan kelas D' have been expired on 3.01.2017. Please submit valid license for 2017.	Licenses	Yes	15	16-Jan-2017	31-Jan-2017	IEHS	ACTIVE
<a href="#">Edit</a>	DOSH (PMT 5543-5549)	( 5 PMT will be expired on 14.03.2017) 1. Filter Housing PMT 5543 2. Filter Housing PMT 5544 3.ADSORBER DN 1300 x 1484 PMT 5546 4. After Cooler PMT 5548 5.AIR RECEIVER 2000 LITRES PMT 5549 Please arrange with DOSH accordingly for renewal.	Permits	Yes	30	12-Feb-2017	14-Mar-2017	IEHS	ACTIVE

1 - 3



PPE Signage



Audiometric Test



Noise Training



Noise Monitoring

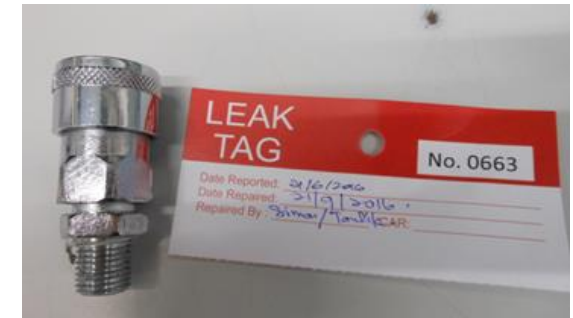


# NOISE IMPROVEMENT : CONDUCT MONTHLY LEAK TEST MONITORING

**BEFORE**

No frequent check on compress dry air (CDA at production area)

**AFTER**



Conduct monthly CDA leak test at production area



# NOISE IMPROVEMENT : PROVIDE DISPOSABLE EAR PLUG TO IN HOUSE VENDOR

**BEFORE**



**AFTER**



## BEFORE



Damage PPE - ear muff still in used

## AFTER

### ONE POINT LESSON

Subject: <u>PPE Storage Condition</u>	Process: <u>PF</u>
Type: <u>Awareness</u>	Leader: _____
Project: _____	Trainer: <u>Thiru</u>
	Project No: _____

#### PERHATIAN !

1. Sebelum memakai ear muff, pastikan keadaan earmuff tidak rosak / lusuh.
2. Sekiranya terdapat kerosakan pada earmuff, sila maklumkan secepat mungkin kepada pihak IEHS dengan segera.
3. Letak semula earmuff di tempat asal selepas menggunakannya.



Ear muff yang rosak



Ear muff yang dalam keadaan baik



Create one point lesson for the damage PPE



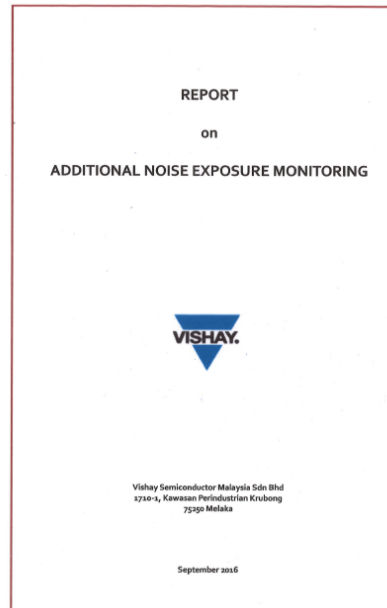
## NOISE IMPROVEMENT : CONDUCT ADDITIONAL NOISE MONITORING

### BEFORE

No baseline data for noise exposure during - shifting machine at new area

### AFTER

Conduct additional noise monitoring. Engaged external consultant. Test conducted on 14 September 2016 and no employee were exposed to the high noise level.





# NOISE IMPROVEMENT : CENTRALIZE VACUUM PUMP TO SUPPORT PRODUCTION

**BEFORE**



Individual vacuum pump install at production machine (40 units) . Noise level ( 90 dB)

**AFTER**



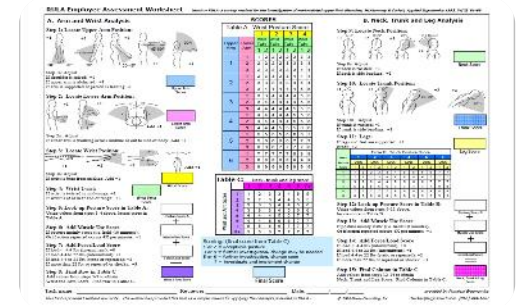
Installation of centralize vacuum pump at facilities plant building complete with noise absorption material (rockwool with cement board). Noise level reduce to avg < 70 dB



**Ergonomic Assessment**



**Lux monitoring**



**Ergonomic Training**

# ERGONOMIC IMPROVEMENT : REDUCE IMPACT ON ERGONOMICS ISSUE AT SCHEDULED WASTE STORE

**BEFORE**



Worker manually transfer waste cleaning agent into blue drum



**AFTER**



Waste cleaning agent were recycle and automatically transfer to the blue drum



## ERGONOMIC IMPROVEMENT : IMPROVEMENT AT PRODUCTION LINE

**BEFORE**



**AFTER**



**BEFORE**



**AFTER**



## ERGONOMIC IMPROVEMENT : IMPROVEMENT AT PRODUCTION LINE

**BEFORE**



**AFTER**



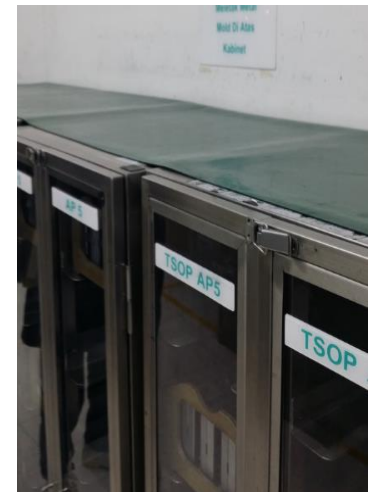


## BEFORE



Carrier / magazine were put on top of cabinet

## AFTER



Not allowed to put the carrier / magazine to reduce impact safety impact especially on ergonomics issue

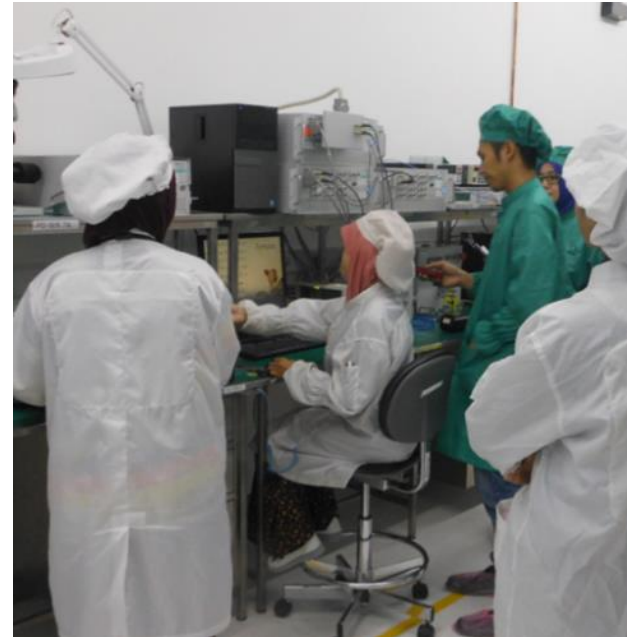
## ERGONOMIC IMPROVEMENT : ADDITIONAL ERGONOMICS RISK ASSESSMENT AT NEW SHIFTING AREA

### BEFORE

No baseline data for Ergonomics Risk Assessment at new shifting area

### AFTER

Conduct Ergonomics Risk Assessment at new shifting area. Engaged with external consultant



- Paper submission to Asia Regional

*Prepared by:*

**Dr. Gunalan Paramasevam**

*Sr. Manager*

IEHS Dept.

Vishay Semiconductor Malaysia Sdn.Bhd.

[To conduct ergonomics assessment using RULA/REBA methods for visual inspection process by Q2 2016 There are intangible benefits include reduction of occupational ergonomic illness, compliance to IEHS Standards, compliance to EICC Standards, improve productivity due to lower back injuries : A Case Study in Vishay Semiconductor Malaysia Sdn. Bhd.]



## ERGONOMICS / PHYSICAL DEMANDING TASK - Advisory Only

**Standard 22.01:** Company processes and facilities are to be designed, constructed, operated and maintained to accommodate human capabilities and limitations, in order to enhance employee safety, health and performance.

**Standard 22.02:** Site has conducted interviews to workers regarding efforts by the facility to control ergonomic hazards including training for workers.

**Standard 22.03:** Each facility is to have a written ergonomics program providing for:

- a) Assessment of new tasks and of jobs that have caused musculoskeletal and repetitive trauma disorders, as well as high risk jobs associated with repetitive motions, awkward postures, use of vibrating or impact tools, heavy lifting (>25 pounds/6 kg), lack of control over pace of work and other recognized risk factors.
- b) Design and implementation of controls where problems are identified.
- c) Consideration of ergonomics issues in designing new processes and purchasing equipment, furniture, workstations and materials.
- d) Employee involvement in all phases of the program including: the identification, assessment and control of risks; training in ergonomic hazards and the proper use and adjustment of their equipment, tools, furniture and workstations to prevent repetitive trauma and musculoskeletal disorders; and evaluation of the effectiveness of controls.
- e) Health cares for employees with repetitive trauma and musculoskeletal disorders, and accommodation, where possible, for the safe and productive placement of employees with medical work restrictions.
- f) Regular review and measurement of the effectiveness of the program, with modifications made as appropriate.



# ERGONOMIC IMPROVEMENT : EHS CHECKLIST

VISHAY						
EHS CHECKLIST & RATING SYSTEM						
Facility: Vishay Mgaile						
Date : April 12-13, 2016						
Auditor: VS Lee & Dr P. Gundan						
Item	Category	IEHS Standards	Total Non Compliance	Non Compliance	Percentage Compliance	Remarks
1	Environmental Pollution Control	A. Air Pollution Control	500	0.00	100.0%	
		B. Noise	340	5.00	98.5%	To conduct 8 hrs TWA for personal monitoring at high noise area
		C. Water Pollution Control	790	0.00	100.0%	
		D. Drinking Water	100	15.00	85.0%	Change the sampling point for the complete parameters of drinking water from raw water storage to point of use.
		Sub-Total	1,730	20	98.8%	
2	Waste Management	A. Solid Waste Management	330			
		B. Hazardous Material Recycling/Electronic Waste	90			
		C. Hazardous Waste Management/Electronic Waste	1,210			
		Sub-Total	1,630			
3	Material Management	A. Transportation Of Hazardous Materials	170			
		B. Packaging	30			
		C. Use And Storage Of Materials	1,710			
		Sub-Total	1,910			
4	Risk Management	A. Emergency Response	320			
		B. Loss/Fire Protection	500			
		C. Site Safety	740			
		D. Process Safety	350			
		E. Equipment Safety	300			
		F. Electrical Safety/Lockout- Tagout	600			
		G. Building Safety	100			
		Sub-Total	2,890			
5	Occupational Hygiene	A. Personal Protective Equipment	200	0.00	100.0%	
		B. Hazard Communication	270	0.00	100.0%	
		C. Industrial Hygiene/Respiratory Protection	600	0.00	100.0%	To request verification from the service provider for the O2 TLV.
		D. Ergonomics	80	0.00	100.0%	
		E. Radiation Protection	180	0.00	100.0%	
		F. Occupational Health	520	0.00	100.0%	
		Sub-Total	1,850	0.00	100.0%	
6	Energy	Capacity of Energy	650	0.00	100.0%	
7	General EHS Management and Community Awareness	A. General EHS Management	2030	0.00	100.0%	
		B. Regulatory Compliance	180	0.00	100.0%	
		C. Community Right To Know	180	0.00	100.0%	
		D. Zoning and Planning(Zoning)	50	0.00	100.0%	
		E. Zoning and Planning(Losses)	80	0.00	100.0%	
		Sub-Total	2,500	0.00	100.0%	
		Grand Total	13,160	90	99.3%	

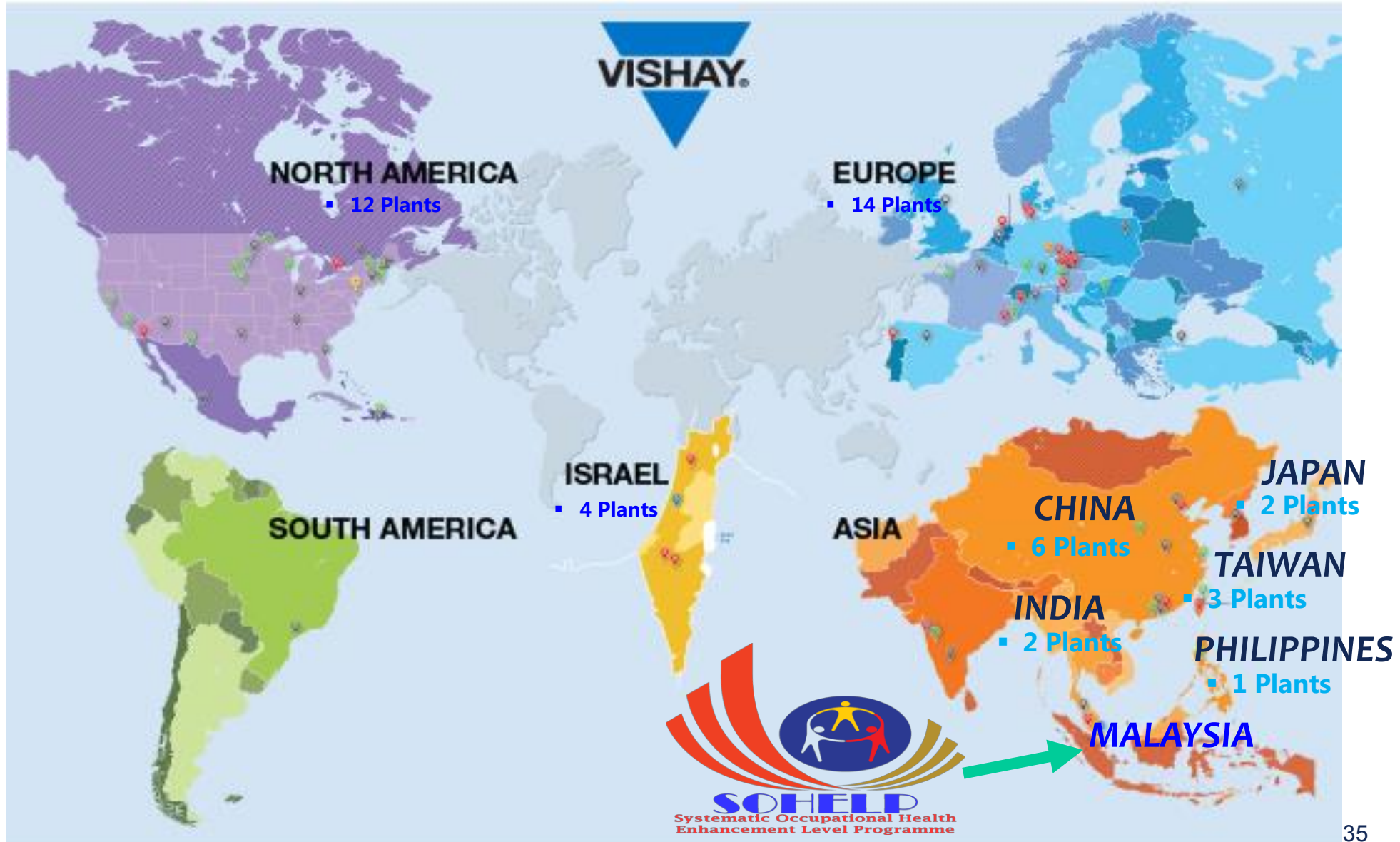
## 5 Occupational Hygiene

- A. Personal Protective Equipment
- B. Hazard Communication
- C. Industrial Hygiene/Respiratory Protection
- D. Ergonomics
- E. Radiation Protection
- F. Occupational Health

Sub-Total

Sub-Total

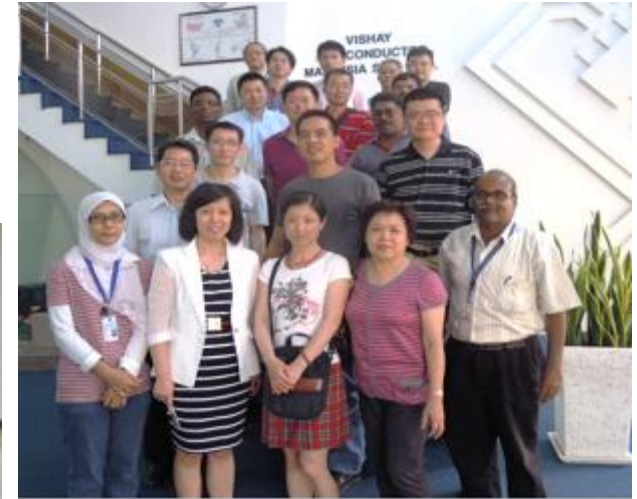
# BEST PRACTICE SHARING OF SOHELP PROGRAM ON ERGONOMICS, CHEMICAL AND NOISE







# BEST PRACTICE SHARING OF SOHELP PROGRAM ON ERGONOMICS, CHEMICAL AND NOISE





# BEST PRACTICE SHARING OF SOHELP PROGRAM ON ERGONOMICS, CHEMICAL AND NOISE



Comply to Local Authorities  
Requirement

Reduce report on ergonomics  
issue

SOHELP

Significant improvement  
especially on chemical  
management system

Cascade down SOHELP  
information to in house vendor





# LESSON LEARNED SHARING







# STANDARDIZATION & FURTHER PLAN



Promote SOHELP with VSM staff, Vendor and Vishay Asia & Vishay Worldwide



## CSR PROGRAM 2017 WITH PRIMARY SCHOOL (SEKOLAH KEBANGSAAN PAYA RUMPUT, MELAKA)

### ☐ Road Safety Campaign

#### ☐ Safety and Health Campaign

- Ergonomics Risk Assessment at School (SOHELP)
- Safety Talk by JKPP Melaka (SOHELP)
- C.A.T Campaign (SOHELP)

### ☐ Environmental Campaign



- DOSH MELAKA
  - DOSH HQ
- VISHAY TOP MANAGEMENT
  - VISHAY VENDOR
  - VISHAY EMPLOYEES

**.....FOR US TO IMPLEMENT SOHELP AND  
SHARE TO OTHER COMPANIES**