



**ENVIRONMENTAL QUALITY ACT
1974 (ACT 127):
ENFORCEMENT AND WATER
POLLUTION PREVENTION
IN MALAYSIA**

***SITI ZALEHA BT IBRAHIM
DIRECTOR
DEPARTMENT OF ENVIRONMENT, SELANGOR***

DEPARTMENT OF ENVIRONMENT, MALAYSIA



VISION

Environmental conservation for the well-being of the people

MISSION

To ensure sustainable development in the process of nation building



ESTABLISHMENT OF DEPARTMENT OF ENVIRONMENT, MALAYSIA

**14
March
1974**
Gazetment of
the
Environmental
Quality Act
(EQA)

**1 April
1975**
EQA came
into force

**15
September
1975**
Establishment
of Division of
Environment
under Ministry
of Local
Government &
Environment

**1 March
1976**
Division of
Environment
placed under
Ministry of
Science,
Technology &
the
Environment

1983
Named as
Department
of
Environment

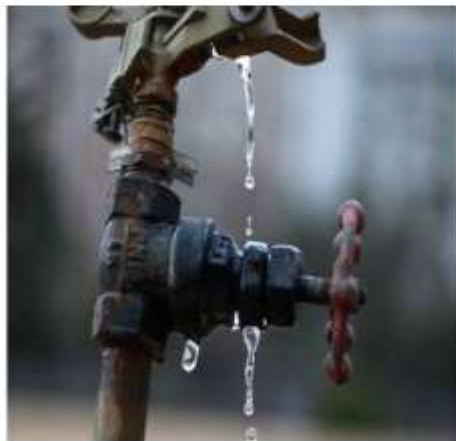
Department of
Environment placed
under the newly formed
Ministry of Natural
Resources & the
Environment

**27 MAC
2004**

BERITA | MALAYSIA

Loji Rawatan Air Semenyih ditu pencemaran bau - Exco Selang

Oktober 04, 2016 16:00 MYT



Sebelum ini, beberapa kawasan di daerah Petaling, Hulu Langat, Kuala Langat dan Sepang mengalami gangguan bekalan air sejak 22 Sept lepas ekoran penutupan Loji Rawatan Air Semenyih akibat pencemaran sungai. - Gambar fail

SHAH ALAM: Loji ditutup tiga hari t di Sungai Semen pagi tadi berikuta

Susulan itu beber Langat, Kuala Lar mengalami gangg sewaktu penutup

Exco Pelancong dan Hal Ehwal Pe berkata pencema Semenyih pada 1

*Loji Rawatan Air Semenyih akan beroperasi semula apabila tiada pen kenyataan di sini hari ini.

Loji Air Semenyih ditutup lagi

Empat daerah terjejas berdepan gangguan bekalan

NIK HAFIZUL BAHARUDDIN | 05 Oktober 2016 12:33 AM

Like 12 Share Tweet Google +

FREE 30KG BAGGAGE ALLOWANCE KOTA KINABALU FROM KUALA LUMPUR BOOK NOW



PASUKAN penguat kuasa daripada pelbagai agensi menyerbu lokasi kilang yang disyaki menyebabkan pencemaran bau terhadap air Sungai Semenyih di Hulu Langat, Selangor, semalam.

JAS siasat kes buang minyak enjin terpakai

1 SEPTEMBER 2013

Like 0 Share Tweet



Palanivel

KUALA SELANGOR - Jabatan Alam Sekitar sedang melengkapkan kertas siasatan berhubung insiden pembuangan minyak enjin terpakai oleh sebuah bengkel penyelenggaraan lori di Jalan Batu Arang Rawang ke dalam Sungai Gong.

Menteri Sumber Asli dan Alam Sekitar Datuk Seri G. Palanivel berkata kertas siasatan itu akan disiapkan secepat mungkin sebelum diserahkan kepada Jabatan Peguam Negara untuk tujuan pendakwaan.

Beliau berkata pengusaha bengkel itu boleh dikenakan tindakan mengikut Akta Kualiti Alam Sekeliling



NO

Home » Feeds » JAS Siasat Kejadian Ikan Mati Di Sungai Lamah

COMMENTS

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Stumble

Email

JAS Siasat Kejadian Ikan Mati Di Sungai Lamah

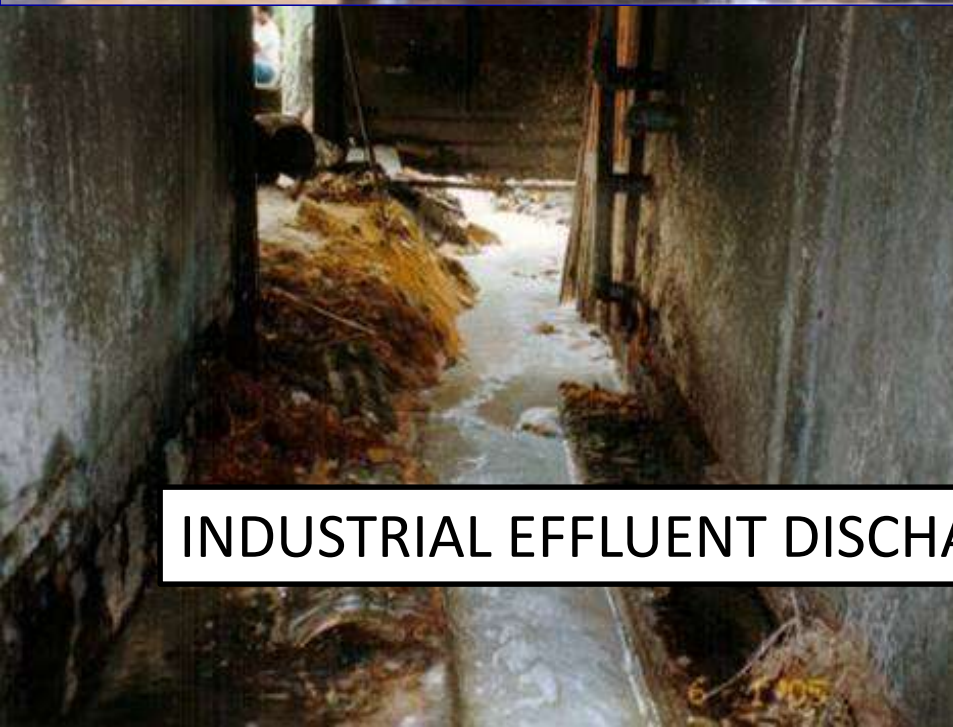
BY BERITASOGOOD.COM | SEPTEMBER 4, 2016 | FEEDS | NO COMMENTS

Published on Sep 4, 2016 in Terkini

KUCHING Jabatan Kimia Bintulu sedang menganalisis sampel air yang diambil dari Sungai Lamah, kira-kira 100 kilometer dari Miri, susulan laporan mengenai banyak bangkai ikan ditemukan terapung di sungai itu beberapa hari lepas.

Menteri Sumber Asli dan Alam Sekitar Datuk Seri Dr Wan Junaidi Tuanku Jaafar berkata sampel itu diambil Jabatan Alam Sekitar (JAS) atas arahnya supaya disiasat kejadian itu dan keputusannya akan diumumkan dalam masa dua atau tiga minggu lagi.

Menurutnya jabatan itu mengkaji kemungkinan sama ada kejadian itu berpunca daripada sisa buangan yang dilepaskan sebuah kilang sawit yang terletak kira-kira 20km dari tempat kejadian.



INDUSTRIAL EFFLUENT DISCHARGES WITHOUT TREATMENT





SEDIMENT PONDS NOT MAINTAINED



Hilang pendapatan akibat sungai tercemar

KUSMU 10/2/14

SABAK BERNAM - Lebih 200 orang nelayan di Sungai Bernam di sini mendakwa kehilangan sumber pendapatan ekoran pencemaran yang berlaku di sungai berkenaan sejak seminggu lalu.



Mereka mendakwa, kejadian berpunca daripada pelepasan sisa buangan pertanian tidak jauh dari

jeti nelayan berdekatan Jambatan Muhibbah Changkat Jelutong di sini.

Wakil kumpulan nelayan terbabit, Ahmad Ghazali Mat Amin, 58, (**gambar kecil**) berkata, ratusan ikan air tawar pelbagai spesies ditemui mati setiap hari di Sungai Bernam, malah ada yang dikesan dalam keadaan pelik dipercayai berpenyakit.

"Air sungai berubah menjadi hitam dan banyak ikan yang selama ini menjadi sumber rezeki kami mati. Kejadian ini merupakan pencemaran terburuk di Sungai Bernam sepanjang 30 tahun saya mencari rezeki di sini," katanya



SEBAHAGIAN daripada ratusan bangkai ikan air tawar pelbagai spesies yang ditemui di Sungai Bernam, Sabak Bernam, Selangor semalam.

ketika ditemui di sini semalam.

Beliau mendakwa, seorang nelayan bersama keluarganya mengalami cirit-birit baru-baru ini selepas memakan ikan yang dijala dari sungai tersebut.

"Mujur nelayan itu belum sempat jual kepada peraih. Jika tidak, tentu orang

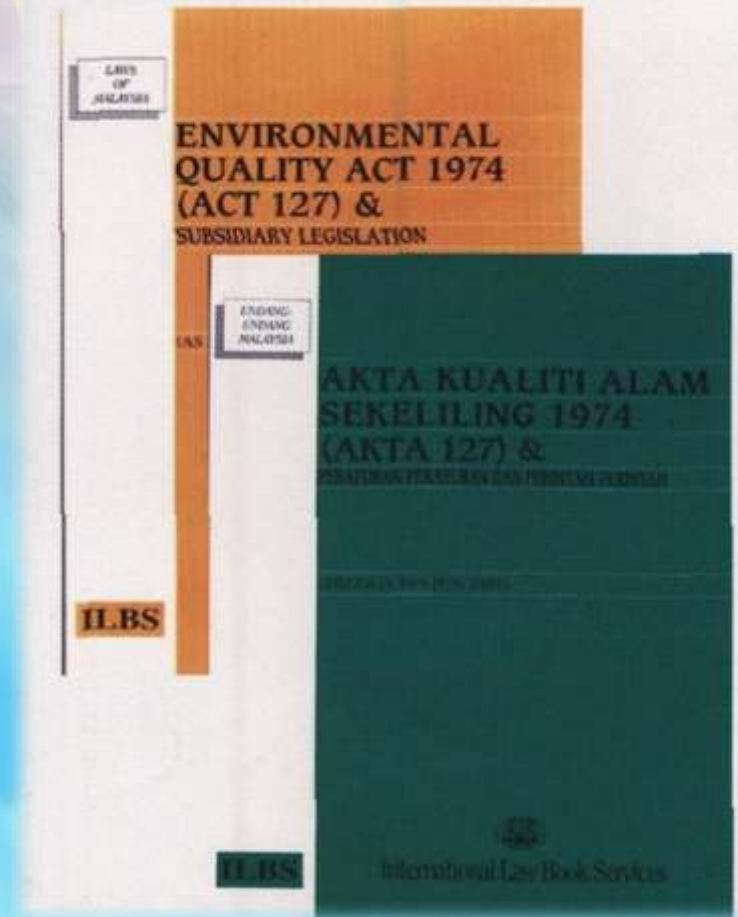
ramai yang menjadi mangsa," katanya.

Dalam pada itu, Ahli Dewan Undangan Negeri Sungai Panjang, Budiman Mohd. Zohdi menggesa kerajaan negeri Selangor dan Jabatan Alam Sekitar mengambil tindakan segera menyasiat dakwaan kumpulan nelayan terbabit.

ENVIRONMENTAL QUALITY ACT 1974

38 subsidiary Environmental Regulations introduced to deal with specific issues ranging from:

- industrial effluents
- sewage discharges
- air emissions from industries
- motor vehicles emissions
- prohibition on open burning
- scheduled wastes management
- Environmental Impact Assessment for prescribed activities



CHALLENGES



Limited resources



Logistic (time-consuming, travel distance)



“Snap shot information” on industry’s compliance status



Increasing number of pollution sources.
Technology and site suitability



High public expectation and complaints

NUMBER OF POINTS SOURCES SUBJECTED TO EQA 1974 VS DOE ENFORCEMENT OFFICERS



DOE : No. Of Pollution Sources Under EQA (2004 - Ogos 2015)

807 (2000)

ENFORCEMENT OFFICERS

1166 (2014)

SOURCES OF WATER POLLUTION SOURCES BY SECTOR, 2015

No	Source of water pollution	No. of sources
1	Manufacturing industries	3258
2	Agro-based industries	
	i. Rubber mills	64
	ii. Palm oil mills	450
3	Piggery	749
4	Sewage treatment plants	
	i. Public	6397
	ii. Private	11,318
	iii. Individual septic tanks (IST)	1,273,978
	iv. Communal septic tanks (CST)	3637
5	Wet markets	888
	Total	1,300,739

SOURCES OF WATER POLLUTION

Point Sources

- Manufacturing industries
- Sewage plants
- Landfill treatment plants



Non-Point Sources

- The major polluters are from the non-point sources which are not under EQA
- DOE Pollution Prevention and Water Quality Improvement Study-only 20 % of the pollution sources (point sources) are under DOE's jurisdiction. The rest are not.
- Commercial, institutional, hawkers, sullage, earthworks, agriculture, aquaculture, restaurants, laundry, car wash, animal farm, mining, surface run-offs







WATER POLLUTION CONTROL APPROACH



OVERVIEW ON WATER POLLUTION CONTROL UNDER EQA 1974



Industrial Effluent Regulations 2009



Sewage Regulations 2009



Leachate Regulations 2009



Prescribed Premises (Crude Palm Oil) 1977



Prescribed Premises (Raw Natural Rubber) 1978



FIFTH SCHEDULE

[Paragraph 11(1)(a)]

ACCEPTABLE CONDITIONS FOR DISCHARGE OF
INDUSTRIAL EFFLUENT OR MIXED EFFLUENT OF STANDARDS A AND B

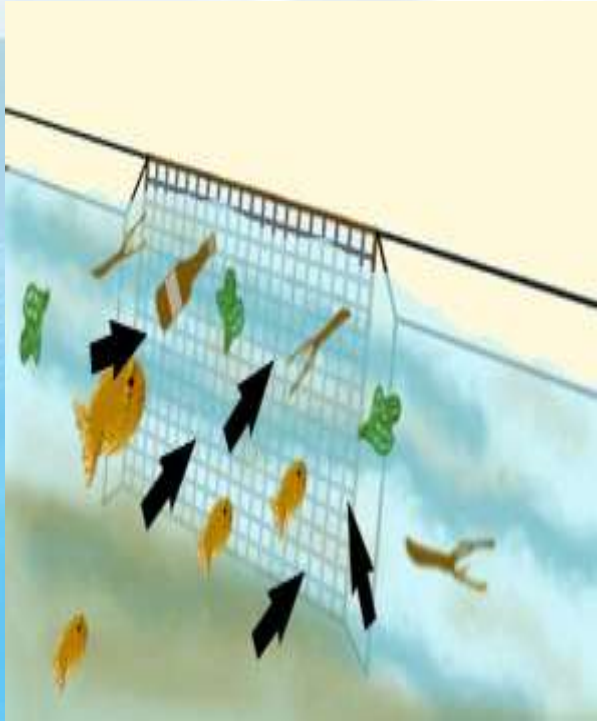
Parameter	Unit	Standard	
		A	B
(1)	(2)	(3)	(4)
(i) Temperature	°C	40	40
(ii) pH Value	-	6.0-9.0	5.5-9.0
(iii) BOD ₅ at 20°C	mg/L	20	50
(iv) Suspended Solids	mg/L	50	100
(v) Mercury	mg/L	0.005	0.05
(vi) Cadmium	mg/L	0.01	0.02
(vii) Chromium, Hexavalent	mg/L	0.05	0.05
(viii) Chromium, Trivalent	mg/L	0.20	1.0
(ix) Arsenic	mg/L	0.05	0.10
(x) Cyanide	mg/L	0.05	0.10
(xi) Lead	mg/L	0.10	0.5
(xii) Copper	mg/L	0.20	1.0
(xiii) Manganese	mg/L	0.20	1.0
(xiv) Nickel	mg/L	0.20	1.0
(xv) Tin	mg/L	0.20	1.0
(xvi) Zinc	mg/L	2.0	2.0
(xvii) Boron	mg/L	1.0	4.0
(xviii) Iron (Fe)	mg/L	1.0	5.0
(xix) Silver	mg/L	0.1	1.0
(xx) Aluminium	mg/L	10	15
(xxi) Selenium	mg/L	0.02	0.5
(xxii) Barium	mg/L	1.0	2.0
(xxiii) Fluoride	mg/L	2.0	5.0
(xxiv) Formaldehyde	mg/L	1.0	2.0
(xxv) Phenol	mg/L	0.001	1.0
(xxvi) Free Chlorine	mg/L	1.0	2.0
(xxvii) Sulphide	mg/L	0.50	0.50
(xxviii) Oil and Grease	mg/L	1.0	10
(xxix) Ammoniacal Nitrogen	mg/L	10	20
(xxx) Colour	ADMI*	100	200

PHYSICAL/CHEMICAL TREATMENT

- Filter press



SCREENING



To remove big particle/coarse



OIL AND GREASE TRAP



To remove fat

U0293

EQUALIZATION
TANK

T24:1





AERATION TANK

SEQUENTIAL BATCH REACTOR (SBR)





Floating scum due to poor sedimentation

Color of aeration change



FINAL DISCHARGE POINT
FOR TREATED EFFLUENT

2007/01/25 12:11

IN-SITU MEASUREMENT





In Situ Analysis

Temperature, pH, Dissolved Oxygen (DO)

Three reading at three points

	Temperature (°C)	pH	DO (mg/l)
1 st	30.18	7.23	6.87
2 nd	30.11	7.32	6.77
3 rd	30.16	7.43	6.76
Average	30.15	7.33	6.80
Standard B	40	5.5-9.0	- 5-7 Ok







Section 25, Environment Quality Act 1974

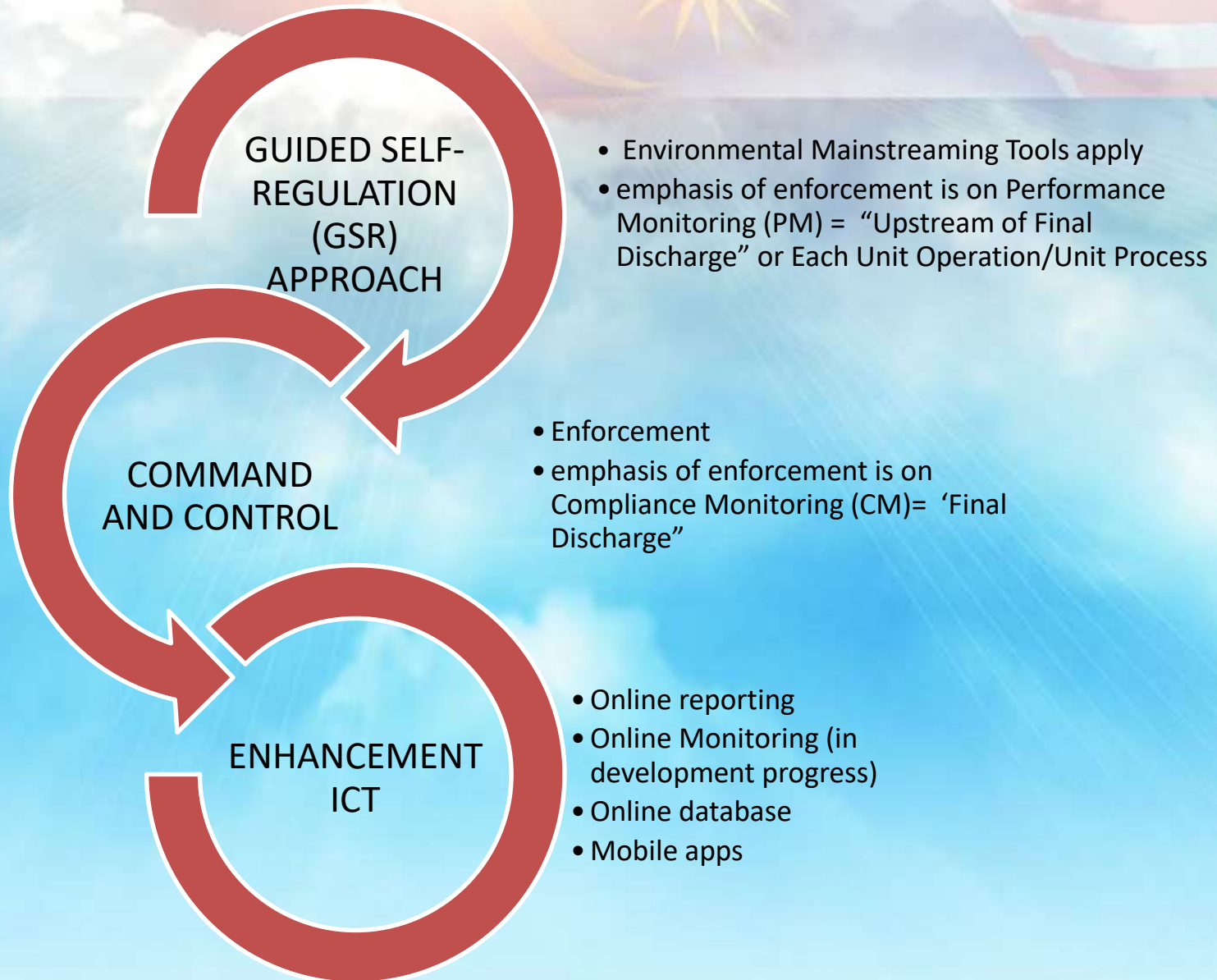
- Restriction on pollution of inland waters. No person shall, unless licensed, discharge or deposit any pollutants or wastes into any inland water in contravention of the acceptable conditions.
- Penalty: RM 100,000 or 5 years imprisonment or both and fined RM 1000.00/day

Regulation 18.

Prohibition against industrial effluent or mixed effluent discharge through by-pass

“By-pass” means any diversion of industrial effluent or mixed effluent from any portion of an industrial effluent treatment system.

POLLUTION CONTROL APPROACHES



GUIDED SELF-REGULATION (GSR) APPROACH

Environmental Mainstreaming Tools



GUIDED SELF-REGULATION (GSR)

- Guided Self Regulation is whereby the regulated sectors (primarily, the industries and project proponents) are 'taken by the hand so to speak, towards achieving the goal of self-regulation through environmental mainstreaming tools



1. Environmental policy



2. Competent person



3. Performance monitoring facilities & Instrument



4. Environmental Management & Decision making Process Committee



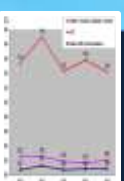
5. Record keeping



6. Data analysis and interpretation



7. Reporting and communication



8. Future improvement

COMPETENT PERSON

The operation of IETS should be supervised by competent person

Certified by Director General of DOE

Ensure the competent person on duty at anytime during IETS operation

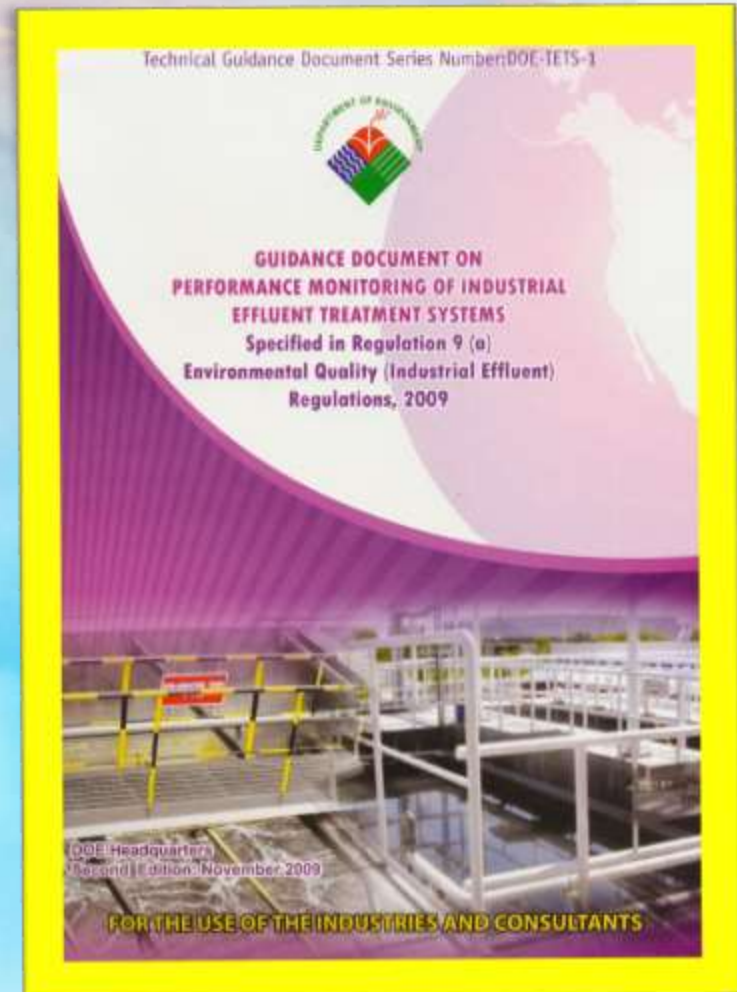
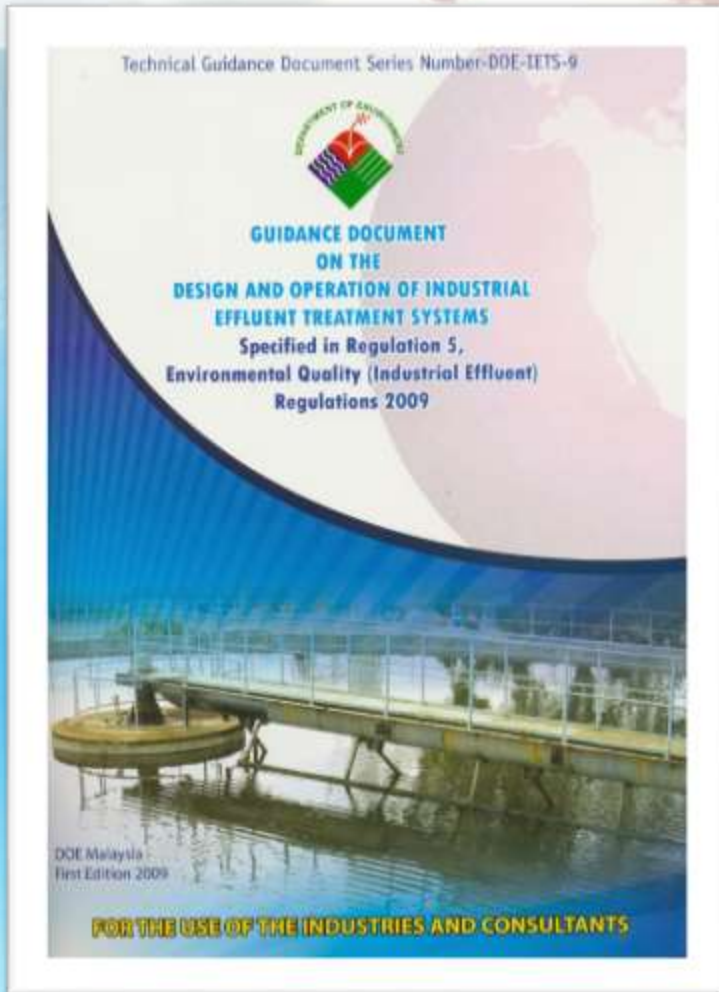
- Regulation 10, Industrial Effluent Regulations, 2009
- Training by Environmental Institute of Malaysia (EiMAS), DOE



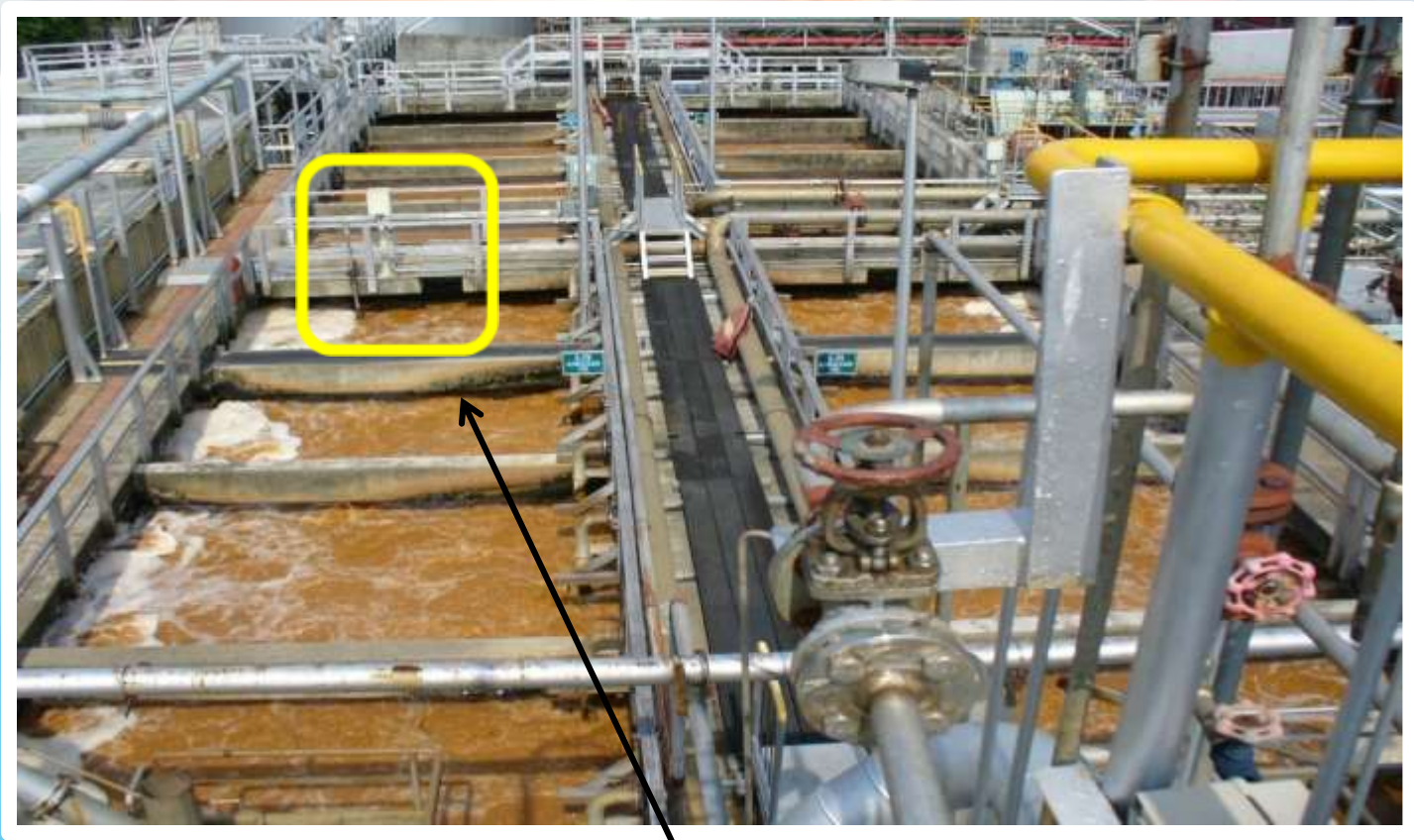
COMPETENT PERSON PROCESS



GUIDANCE DOCUMENT

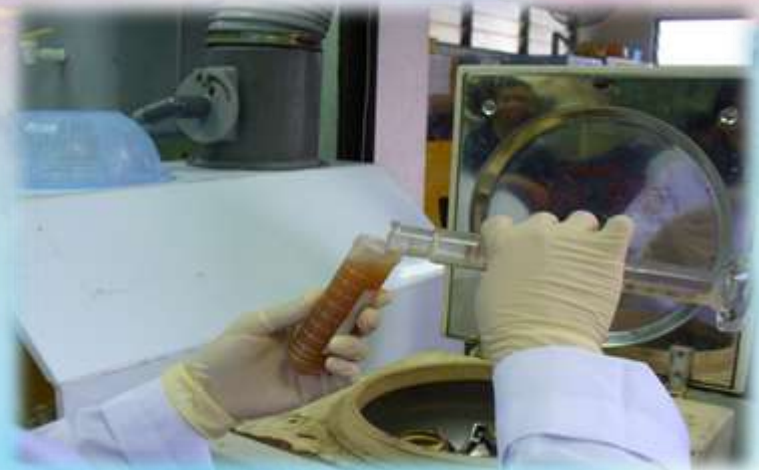






ON-LINE DO METER

INDUSTRIAL LAB







Floating scum due to poor sedimentation



Color of aeration change

Process/ treatment

Frequency

MACFOOD SERVICES (M) SDN BHD. WASTEWATER TREATMENT PLANT DAILY MONITORING DATA SHEET

Date: 06-03-2011 Day: SUNDAY

Time	Neutralization Tank	Distribution Tank	UASB Reactor	AICAR 1				AICAR 2				Clarifier	SHT
	pH01	pH02	pH 03	Aeration(1) DO	2 DO	Settling Test(30min)(1)	Settling Test(30min)(2)	Aeration(1) DO	2 DO	Settling Test(30min)(1)	Settling Test(30min)(2)	pH 04	pH 05
8.00 am	6.88	6.88	6.65	2.50	2.40	1st Cycle	1st Cycle	2.60	2.80	1st Cycle	1st Cycle	7.47	7.13
10.00 am	7.00	6.95	6.64	2.60	2.70			2.50	2.70			7.30	7.16
12.00 pm	7.15	6.90	6.63	2.30	2.40	45%	44%	2.70	2.50	40%	38%	7.45	7.50
2.00 pm	7.38	6.88	6.61	2.70	2.50			2.80	2.50			7.59	7.52
4.00 pm	7.08	6.90	6.61	2.80	2.70	2nd Cycle	2nd Cycle	2.70	2.60	2nd Cycle	2nd Cycle	7.59	7.48
6.00 am	7.51	6.87	6.64	2.60	2.50			2.70	2.60			7.40	7.12
8.00 pm	7.56	6.90	6.72	2.50	2.40	48%	45%	2.60	2.80	40%	40%	7.63	7.10
10.00 pm	7.60	7.10	6.72	2.65	2.50			2.60	2.90			7.50	7.52
12.00 pm	7.60	7.01	6.96	2.60	2.45	3rd Cycle	3rd Cycle	2.50	2.55	3rd Cycle	3rd Cycle	7.60	7.52
2.00 am	7.05	6.88	6.77	2.70	2.70			2.70	2.80			7.50	7.10
4.00 am	7.65	6.96	6.77	2.25	2.70	40%	40%	2.50	2.70	42%	40%	7.62	7.20
6.00 am	7.09	6.94	6.90	2.75	2.60			2.80	2.82			7.30	7.10
Control Limit	6.5-7.8	6.5-8.5	6.5-7.5	2.0-4.0	2.0-4.0	30-50(%)	30-50(%)	2.0-4.0	2.0-4.0	30-50(%)	30-50(%)	5.5-9.0	6.8-8.2

EXAMPLE

Morning Shift: SYAIFUL
 Afternoon Shift: ZAIM
 Night Shift: ANUAR
 Supervisor: _____

UASB Settling Test: 1m = 90%, 2m 80%, 3m 68%, 4m 50%
 Time taken: 9:00 am

Checked By: _____
 Name: Mohamad Nazir B. Mohd Luding
 Security, OSH and Services Manager
 MacFood Services (Malaysia) Sdn. Bhd.
 (Co. Reg. No. 163762-A)
 Date: _____
 Time: _____

Remark: _____

Control limit

Dissolve oxygen

Verification

SV 30

pH

Performance monitoring records keeping for IETS

ENFORCEMENT ACTION

- Written Notice
- Compound
- Seize equipment
- Prosecution
- Revocation of license
- Prohibition order
- Arrest without warrant



ENFORCEMENT ACTION



IMPACT TO RIVER



PRODUCTION AREA



PROHOBTION ORDER DONE



INSPECTION DONE

COMMAND AND CONTROL

End of Pipe

PREVIOUS
PRACTISE

Downstream
activity

Product focused

Result focused

'Too late'
information

Process control

End of Pipe +
Process control

CURRENT
PRACTISE

Upstream activity

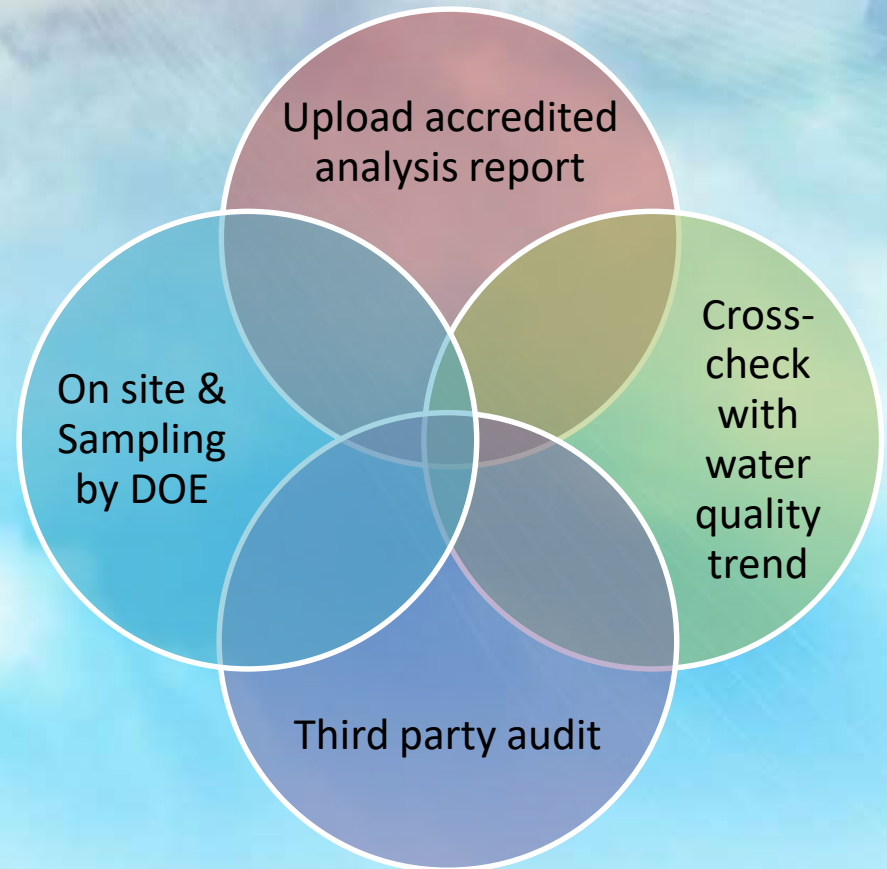
Ingredient focused

Process focused

'Early warning'
information

In control of process

ENHANCEMENT OF ENFORCEMENT ACTIVITIES



ENHANCEMENT OF ICT

ENFORCEMENT AND COMPLIANCE MONITORING SYSTEM

E-KAS



- Electronic Environmental Pollution Control- Integrated information management system of environmental pollution sources and enforcement action

OER



- Online Environmental Reporting- for Industries including Palm Oil mill and rubber mill, Sewage & Landfill Leachate.
- Frequency, Parameter to be monitored are specified.

GIS



- Geographical information system-for mapping and overlay with important data

PROPOSED CEDMS



- Continuous Effluent Discharge Monitoring System- Real time for effluent quality discharge monitoring

ONLINE ENVIRONMENTAL REPORTING

OER : Home

oer.doe.gov.my/pages/home

HOME REGISTER CONTACT US MANUAL

JABATAN ALAM SEKITAR MALAYSIA

ONLINE ENVIRONMENTAL REPORTING

News

Responsible Person under Section III :
Declaration
05/08/2015

Username and Password
22/05/2015

Submission of Online Environmental Report (OER) is a mandatory requirement under the following regulations:
24/10/2014

Read more

User Login

Username
Username

Password

Login

Forgot password?

The site is best viewed in IE Version 11, Mozilla Firefox or Google Chrome.

Jabatan Alam Sekitar, Malaysia
Kementerian Sumber Asli Dan Alam Sekitar
Aras3, Podium 3, Wisma Sumber Asli, No.25, Persiaran Perdana, Presint 4, 62574 W.P. PUTRAJAYA
General Line: 03 - 8871 2000 / 8871 2200 Fax Number : 03 - 8889 1373/75

MONTHLY INDUSTRIAL EFFLUENT OR MIXED EFFLUENT OR SEWAGE DISCHARGE ONLINE MONITORING SYSTEM



Premise Info

Sewage

Industrial Effluent

Mixed Effluent

State

User Levels

User Permissions

Logout

TABLE: SEWAGE

Export to Word

Export to Excel

Printer Friendly

Search

State = Please Select

Reporting Year =

Reporting Month = Please Select

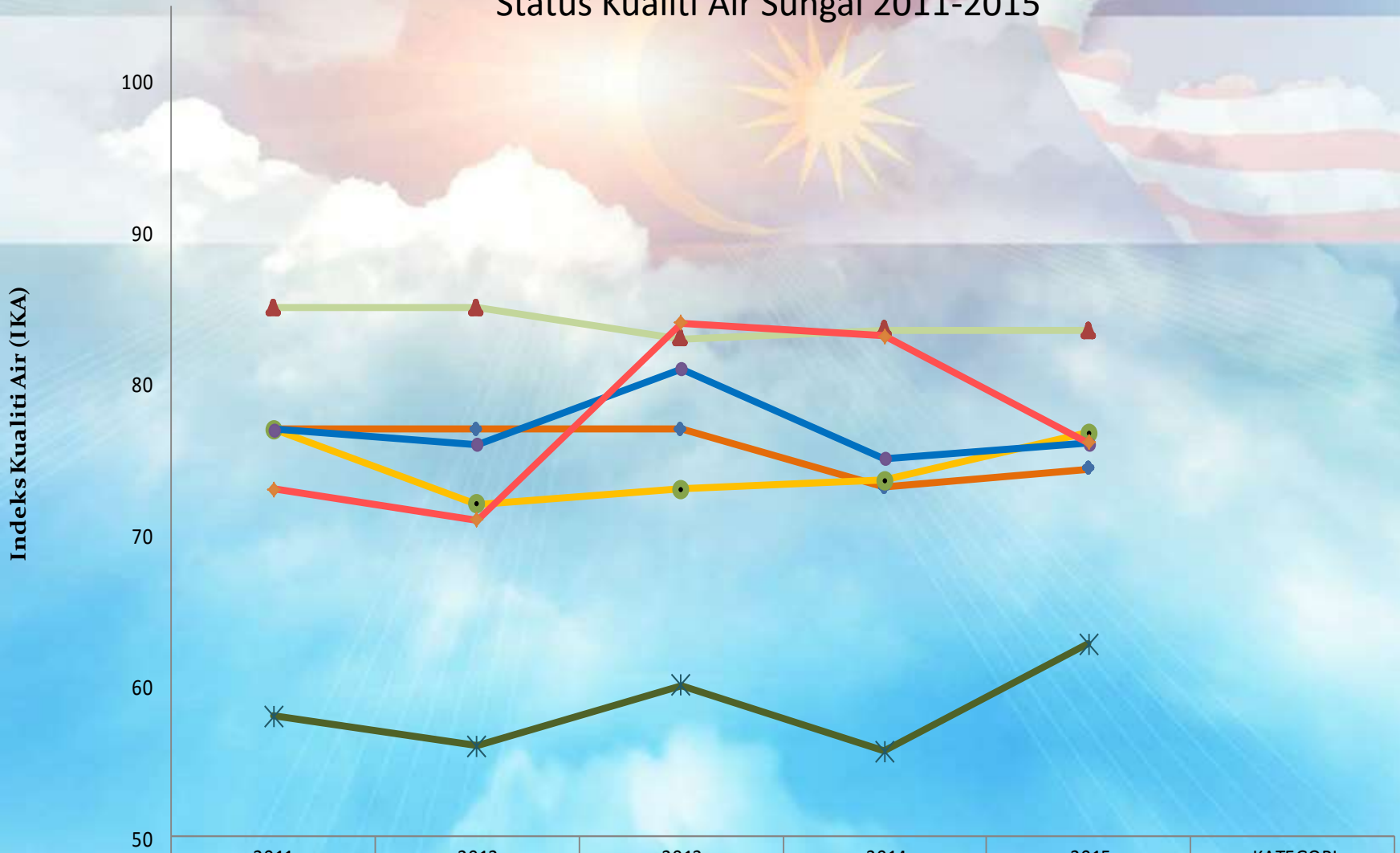
Search (*) [Show all](#)

Exact phrase All words Any word

[+ Add New Record](#) Page 1 of 14 Records 1 to 15 of 202 Page Size 15

#	View	Edit	Delete	Premise Name	Premise Address	State	Lab Name	Lab Address	Reporting Year	Reporting Month
1.		 SUBMITTED		BENCHMARK ELECTRONICS (M) SDN BHD	FIZ, PHASE 1,	PULAU PINANG	SPECTRUM LABORATORIES (PENANG) SDN BHD	1904, TKT.1, JALAN BUKIT MINYAK, TAMAN SRI MANGGA, BUKIT MERTAJAM	2010	SEP
2.		 SUBMITTED		PANASONIC SYSTEM NETWORKS MALAYSIA SDN. BHD	PLO 1,KAWASAN PERINDUSTRIAN SENAI, KB 104	JOHOR	SPECTRUM LABORATORIES (JOHORE) SDN. BHD	18A, JALAN MOLEK 2/5, TAMAN MOLEK, 81100 JOHOR BAHRU, JOHOR	2010	SEP
3.		 SUBMITTED		AIDA MANUFACTURING (M) SDN BHD	PLO 524, JALAN KELULI 81700 PASIR GUDANG JOHOR	JOHOR	SPECTRUM LABORATORIES (JOHORE) SDN BHD	18A JALAN MOLEK 2/5, TAMAN MOLEK 81100 JOHOR BAHRU, JOHOR	2010	AUG
4.		 SUBMITTED		AIDA MANUFACTURING (M) SDN BHD	PLO 524, JALAN KELULI 81700 PASIR GUDANG JOHOR	JOHOR	SPECTRUM LABORATORIES (JOHORE) SDN BHD	18A JALAN MOLEK 2/5, TAMAN MOLEK 81100 JOHOR BAHRU, JOHOR	2010	JUN
5.		 SUBMITTED		AIDA MANUFACTURING (M) SDN BHD	PLO 524, JALAN KELULI 81700 PASIR GUDANG JOHOR	JOHOR	SPECTRUM LABORATORIES (JOHORE) SDN BHD	18A JALAN MOLEK 2/5, TAMAN MOLEK 81100 JOHOR BAHRU, JOHOR	2010	JUL
6.		 SUBMITTED		AIDA MANUFACTURING (M) SDN BHD	PLO 524, JALAN KELULI 81700 PASIR GUDANG JOHOR	JOHOR	SPECTRUM LABORATORIES (JOHORE) SDN BHD	18A JALAN MOLEK 2/5, TAMAN MOLEK 81100 JOHOR BAHRU, JOHOR	2010	MAY
7.		 SUBMITTED		AIDA MANUFACTURING (M) SDN BHD	PLO 524, JALAN KELULI 81700 PASIR GUDANG JOHOR	JOHOR	SPECTRUM LABORATORIES (JOHORE) SDN BHD	18A JALAN MOLEK 2/5, TAMAN MOLEK 81100 JOHOR BAHRU, JOHOR	2010	APR
8.				AIDA MANUFACTURING (M)	PLO 524, JALAN KELULI	JOHOR	SPECTRUM	18A JALAN MOLEK 2/5, TAMAN	2010	MAR

Status Kualiti Air Sungai 2011-2015



	2011	2012	2013	2014	2015	KATEGORI
Sg. Langat	77	77	77	73	74	Sederhana Tercemar
Sg. Selangor	85	85	83	84	83	Bersih
Sg. Klang	77	72	73	74	77	Sederhana Tercemar
Sg. Tengi	77	76	81	75	76	Sederhana Tercemar
Sg. Buloh	58	56	60	56	63	Sederhana Tercemar
Sg. Sepang	73	71	84	83	76	Sederhana Tercemar

CONCLUSION

- ❑ Shifting the responsibility for pollution control to the industries is the new approach taken by the Department in the formulation of the new regulation for pollution control
- ❑ Re strategize the enforcement programs and continuously improve the compliance monitoring as to find better solution for pollution prevention and control.
- ❑ Enhancement in ICT has shown a promising trend towards reducing the cost of the enforcement implementation which could cover a larger number of pollution sources.



NEGARAKU, ALAM SEKITARKU

TERIMA KASIH

