



## LEMBAGA PELABUHAN JOHOR

JALAN MAWAR MERAH 2, PUSAT PERDAGANGAN PASIR GUDANG 2  
81700 PASIR GUDANG, JOHOR DARUL TAZIM



ISO 9001:2008  
KLR 0403621

Rujukan : LPJ/IP/OPS/31(52)

Tarikh : 16/05/2017

### **SENARAI EDARAN SEPERTI DI LAMPIRAN**

Tuan/Puan,

#### **JEMPUTAN MENGHADIRI LATIHAN "SHIP EMISSION MANAGEMENT SYSTEM (SEMS)"**

Adalah dengan hormatnya saya merujuk kepada perkara di atas dan susulan daripada perbincangan yang telah di adakan pada **09 Mac 2017** di Lembaga Pelabuhan Johor (LPJ).

2. Satu sesi latihan penggunaan "Ship Emission Management System (SEMS)" akan di adakan seperti maklumat berikut:

**Tarikh : 31 Mei 2017 (Rabu)**

**Masa : 10.00 Pagi – 2.00 Petang**

**Tempat : Dewan Besar , LPJ**

3. SEMS akan digunakan untuk mendapatkan maklumat "ship emission" yang di bebaskan oleh setiap kapal yang berlabuh di dalam kawasan had perairan pelabuhan Pasir Gudang dan Tanjung Pelepas.

4. Sepertimana yang telah dipersetujui, pihak agen akan membantu di dalam mendapatkan maklumat yang diperlukan untuk pengiraan "emission" ini melalui SEMS. Sehubungan dengan itu, mohon pihak tuan/puan menghantar agen yang terlibat secara langsung di dalam urusan dengan pihak kapal bagi menghadiri sesi latihan ini. Mohon di panjangkan surat ini dan notis pelabuhan pelaksanaan SEMS ini kepada agensi dan syarikat di bawah seliaan tuan/puan.

5. Sila lengkapkan borang pengesahan kehadiran yang dilampirkan kepada pihak urusetia selewat-lewatnya pada **26 Mei 2017** untuk tujuan penyelarasan. Sebarang pertanyaan lanjut berkaitan perkara ini mohon di ajukan kepada pegawai di bawah:

IBU PEJABAT (PASIR GUDANG) : 07-253 4000 (TEL.)  
07-251 7884 (FAKS)  
PEJABAT PERHUBUNGAN LPJ (TG. PELEPAS) : 07-507 1978 (TEL.)  
07-507 1976 (FAKS)  
TERMINAL FERI CHANGI, SINGAPURA : 02-6545 3230 (TEL.)  
02-6545 3231 (FAKS)  
LAMARAN WEB : <http://www.lpj.gov.my>  
email : [admin@lpj.gov.my](mailto:admin@lpj.gov.my)

Nama : En. Mohd Zahari Bin Mohd Rusjuna  
Jawatan : Pengurus SHE  
No Telefon : 07-2534052  
No. Handphone : 019-7905879  
No. Faks : 07-2523730  
Email : [zahari@lpj.gov.my](mailto:zahari@lpj.gov.my)

Sekian, terima kasih.

#### **"PROFESIONALISME MEMANTAPKAN PERKHIDMATAN"**

Saya yang menurut perintah,

  
(MUHAMMAD RAZIF BIN AHMAD)  
Pengurus Besar  
Lembaga Pelabuhan Johor  
[razifahmad@lpj.gov.my](mailto:razifahmad@lpj.gov.my)

No Kotak: No Dokumen: 168550



No Dokumen : 168550





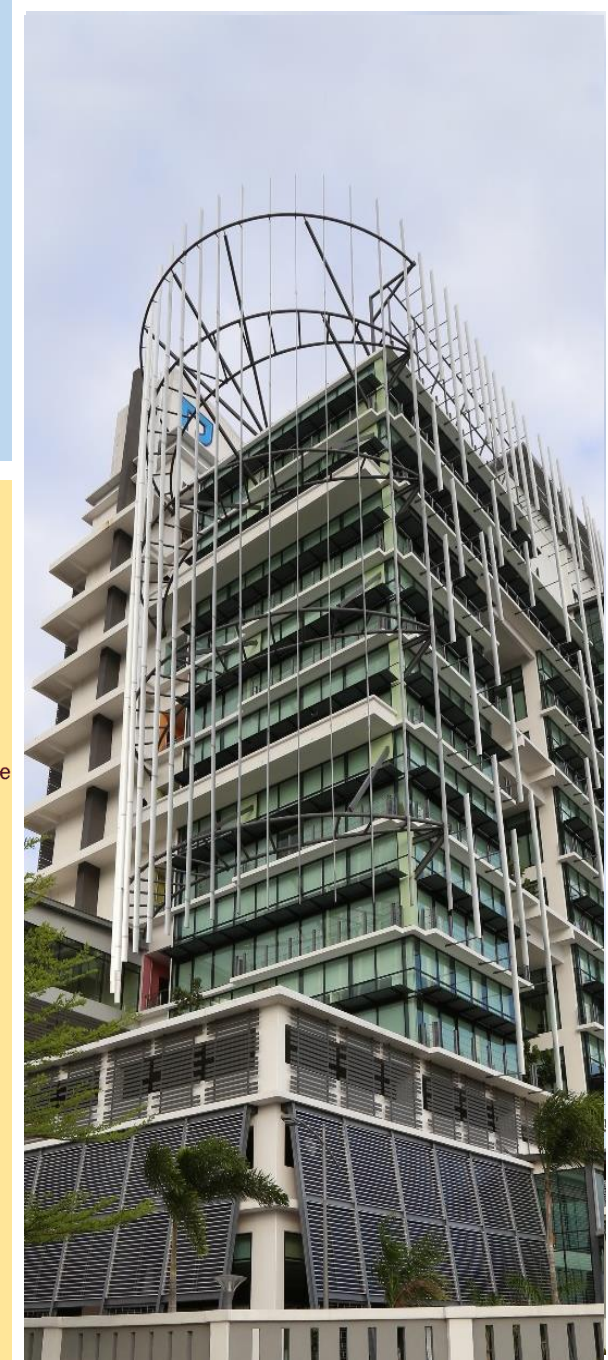


# SHIP EMISSION MANAGEMENT SYSTEM (SEMS)



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

Process Systems  
Engineering Centre  
(PROSPECT)



# WHAT IS DEVELOPING GLOBALLY?

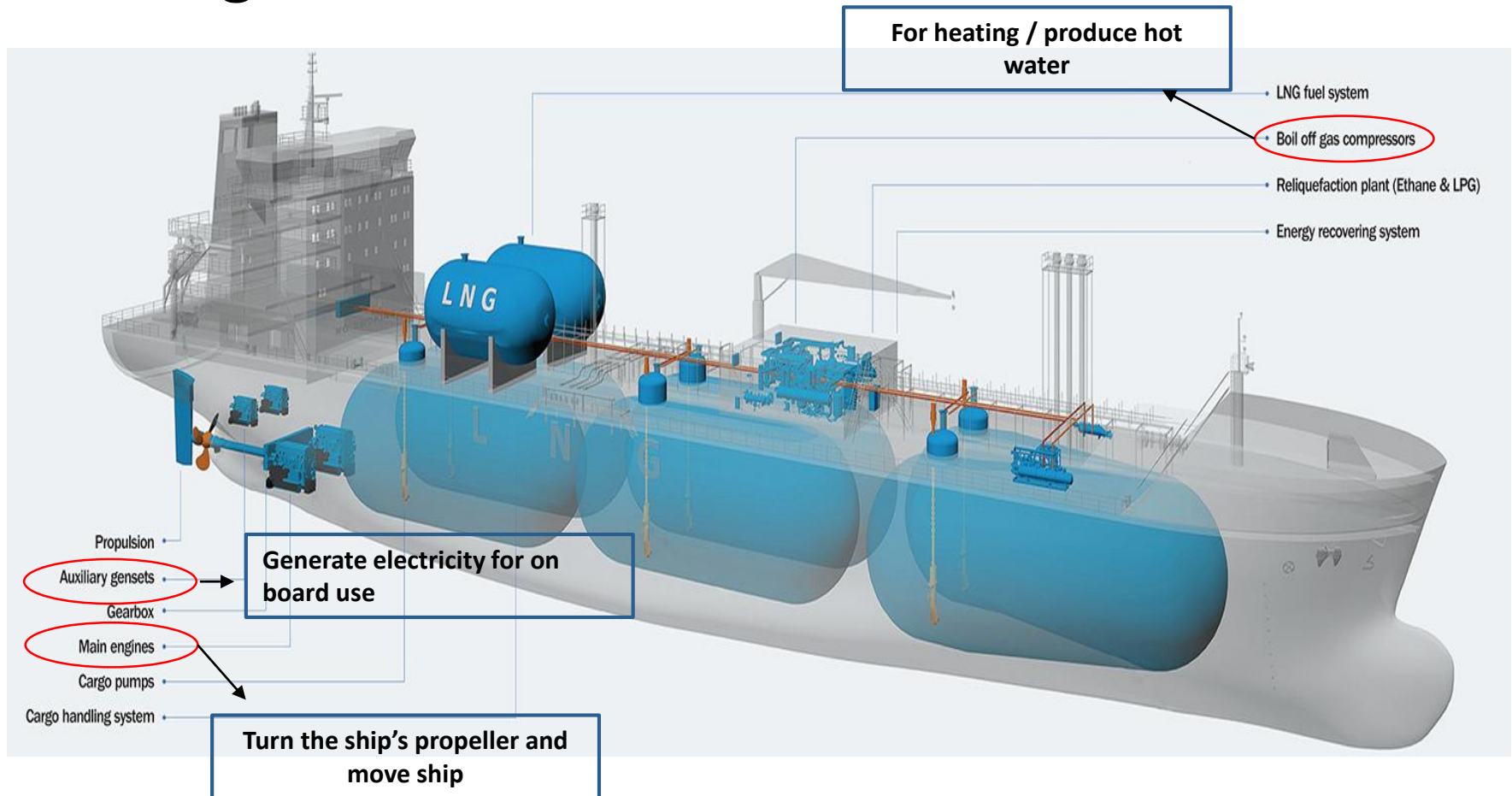
## International Maritime Organization (IMO)

- **MARPOL:**
  - Pollution Prevention from Ships
  - Port Reception Facilities
  - Ship Emissions — SO<sub>x</sub>, NO<sub>x</sub>, CO<sub>2</sub>
  - Fuel Quality — 0.5% Sulphur content by 1 Jan 2020; LNG Bunkers
- **BALLAST WATER MANAGEMENT:**
  - Effective from 8 Sept 2017
  - Baseline study at ports
  - Reception facilities?

# INTRODUCTION

# 1

## Ships are generally powered by large diesel engines

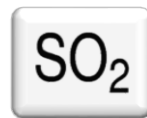


## Ships Modes/Activities in Port



# INTRODUCTION

- ❖ The most important pollutants emitted from ships are:

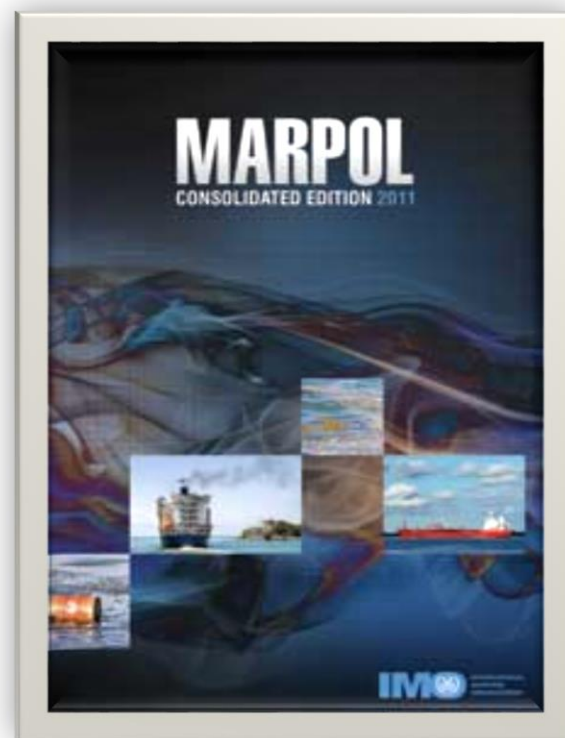


- ❖ The health effects of air pollution at ports may include asthma, other respiratory diseases, cardiovascular disease, lung cancer, and premature death.

## 2

## MARPOL Annex VI

- ❖ Regulations for the prevention of air pollution from ships.





# JOHOR PORT AUTHORITY'S GREEN PORT POLICY



JOHOR PORT AUTHORITY

## GREEN PORT POLICY



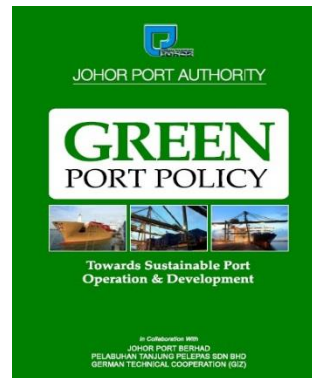
**Towards Sustainable Port  
Operation & Development**

*In Collaboration With*  
JOHOR PORT BERHAD  
PELABUHAN TANJUNG PELEPAS SDN BHD  
GERMAN TECHNICAL COOPERATION (GIZ)



# JPA GREEN PORT POLICY 2014 - 2020

A guide for decision making and establishing a framework for *environmentally friendly port development and operation.*



*Towards more sustainable port operation and development in Malaysia”.*

# JPA GREEN PORT POLICY ELEMENTS



# JPA GREEN PORT POLICY OVERALL OBJECTIVES

## ENVIRONMENT



1

To reduce harmful air emission from port activities and from vessels

2

To protect and improve water quality

3

To protect, maintain or restore aquatic ecosystem and marine habitats

4

To have proper waste management system to reduce environmental and health impact

5

To identify the risks and opportunities resulting from economic, social and environmental factors (Sustainability)

## COMMUNITY ENGAGEMENT



**1**

To interact with and educate the community regarding port operations and environmental programs



# JPA GREEN PORT POLICY OVERALL OBJECTIVES

## PROMOTE SUSTAINABILITY



**1**

To implement sustainable practices in the port

**2**

To use Green Technology Initiatives by employing best equipment and practices to reduce environmental impacts

**3**

To reduce water consumption to maintain water resources and availability

# JPA GREEN PORT POLICY OVERALL OBJECTIVES

## AIR QUALITY



**Overall Objective 1:**  
To reduce harmful air emission from port activities and from vessels

### Basic Program:

1. To engage experts (external) to monitor air pollutants, ambient air limits, API.
2. To establish air monitoring stations for pollution and air quality control.
3. To control emission of smoke / plume and to reduce greenhouse gas emission from vessels, trucks and terminal equipment.
4. To determine the amount and quality of fuel burn by vessels when at berth.
5. To do baseline study for the implementation of Annex VI of MARPOL Convention.
6. To encourage the use of alternative modes of transport by employees, in order to reduce greenhouse gas emissions.
  - a. Provide cycling facilities.
  - b. Provide a bus to operation areas.
7. Green Flag Incentive Program:
  - a. Vessel Speed Reduction Program
  - b. Clean Fuel Program
  - c. Clean Vessel Program
  - d. Clean Truck Program

# JPA GREEN INITIATIVES

## Ship Emission Analysis



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

Process Systems  
Engineering Centre  
(PROSPECT)



- To comply with MARPOL Annex VI – Regulations for the prevention of air pollution from ships.
- To predict the emissions ( $\text{NO}_x$ ,  $\text{SO}_x$ ,  $\text{CO}_2$ , HC and PM) by various ships during anchorage, maneuvering and berthing in JP and PTP.
- To develop an Excel Tool which can be used by JPA for estimating future emissions of ships into JP and PTP.
- Study duration:** 01 Jan – 31 December 2015

# JPA GREEN INITIATIVES

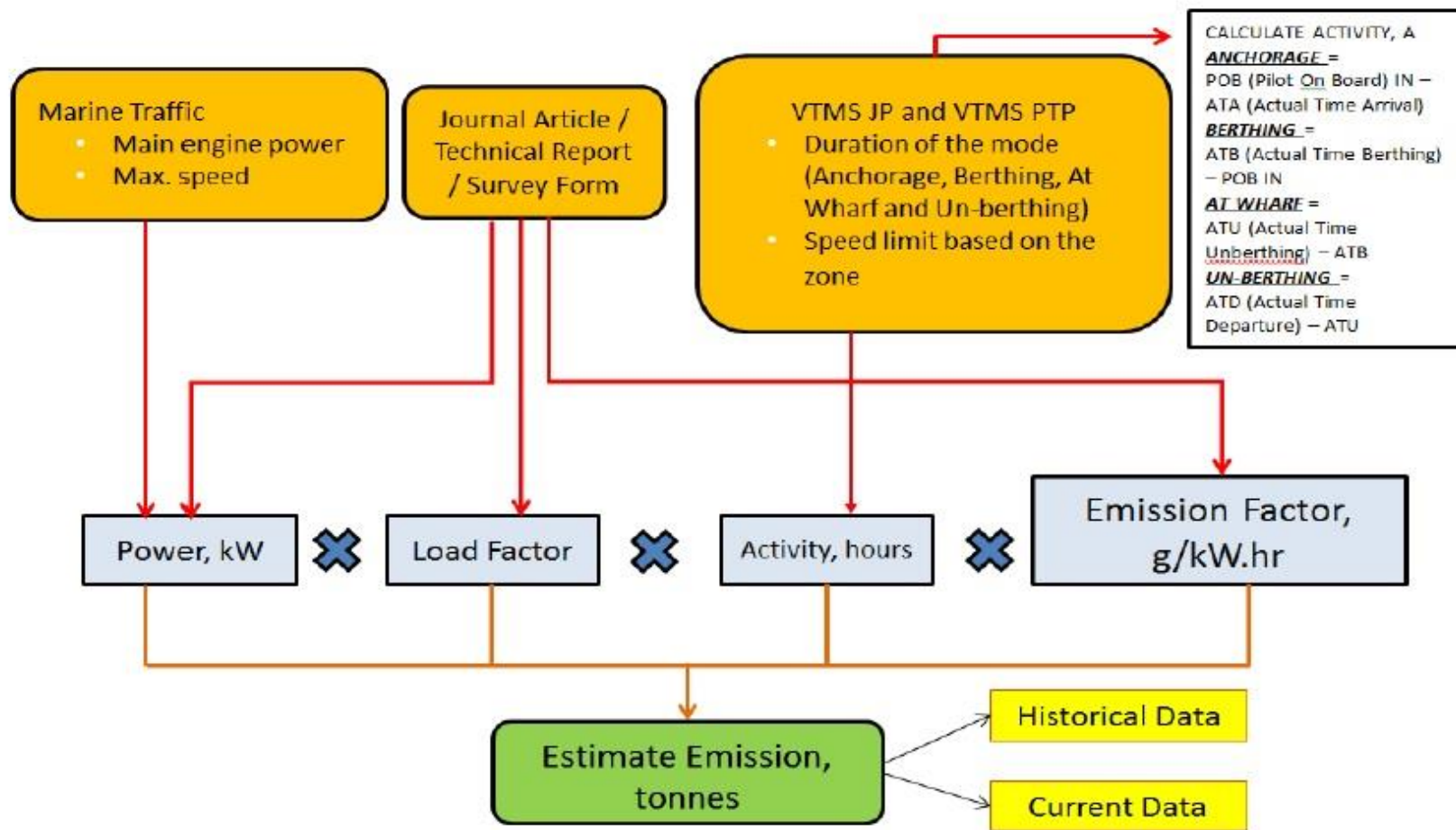


Figure 2.1: Emission Methodology



## LPJ DATABASE

- Vessel Traffic Management System (VTMS)** section of Johor Port Berhad and Port of Tanjung Pelepas
- The number of ships coming into ports, ships particular information and the activity time were extracted. The duration (activity) for each mode; anchorage, berthing, at wharf and unberthing was calculated.





## ONLINE DATABASE

- The complete ships particulars were retrieved from online databases **MarineTraffic.com**.
- Among the data obtained were:
  - Main Engine Power
  - Service Speed
  - Max Speed
  - RPM
- However, the databases do not provide data for boilers and auxiliary engines.

# ESTABLISHMENT SHIP DATABASE



## ONLINE DATABASE

The screenshot shows the MarineTraffic website interface. At the top, there is a navigation bar with options like Live Map, Vessels, Ports, Photos, Participate, and Services. A search bar contains 'Vessel/Port'. Below the navigation bar, there is a table with columns for vessel name, date, and status. The first row shows 'SOKHNA (UTC-2)' with dates '2015-04-18 19:09:00' and '2015-04-20 07:37:00'. A 'Show full list >' button is visible. Below the table, there is a 'Vessel Particulars' section with a sidebar menu and a main content area. The sidebar menu includes General, Companies, Build, Class, Voyage related, Dimensions, Loadline, Tonnage/Capacity, Gear, Structure, Engine details, Contacts, and Vessel Documents. The main content area displays engine specifications: Engine Bore: 980 mm, Engine Builder: NISHISHIBA, Engine Model: NTAKL-REP, Engine Cylinders: 9, Engine Power: 3200 kW, Engine RPM: 97 rpm, Engine Stroke: 2660 mm, Propeller: 1 FIXED PITCH, Freshwater: 687.4 m³, Fuel Consumption: 210 t/day at 24.70 kn, Fuel Oil: 10674 m³, and Lube Oil: 709. The last update is noted as 2015-04-21 02:09:00.

The screenshot shows the 'Vessel Particulars' page for the ship EVER LEADER. The page has a sidebar menu with categories: General, Companies, Build, Class, Voyage related, Dimensions, Loadline, Tonnage/Capacity, Gear, Structure, Engine details, Contacts, and Vessel Documents. The main content area displays the following details:

- General
  - IMO: 9595503
  - Name: **EVER LEADER**
  - MMSI: 566794000
  - Type: **CONTAINER SHIP**
  - Gross Tonnage: 98830
  - Summer DWT: 104504 t
  - Build: 2013
  - Flag: **SINGAPORE**



## SURVEY FORM

- Apart from the data retrieved from online databases, a survey form was developed to get additional information directly from ships coming to PTP and JPB. This form named **Mandatory Information from Johor Port Authority** is a survey form to get the data of main engine, auxiliary engine and boiler such as:
  - Total Installed Engine Power
  - Maximum Continuous Rating Engine Power
  - Engine RPM
  - Engine Power
  - Fuel Consumption
  - Type of Fuel Used in Port
  - Sulfur Content of Fuel
  
- The form was distributed by email through agents & pilots in PTP and JPB.

# ESTABLISHMENT SHIP DATABASE

3

## SURVEY FORM

### MANDATORY INFORMATION FROM JOHOR PORT AUTHORITY

Version 5



JOHOR PORT AUTHORITY (JPA) is the regulatory body for major ports in Johor covering both Johor Port Berhad (JPB) and Port of Tanjung Pelepas (PTP). JPA and Universiti Teknologi Malaysia (UTM) are conducting a study to estimate the emissions due to ship arrival and departure in PTP due to the requirement of MARPOL CONVENTION Annex VI; Prevention of Air Pollution by Ships, which Malaysia is already rectified. To enable this, JPA requires the information on your ship's engine specifications and fuel consumption **ONLY IN THE PORT AREA**. It is a **MANDATORY** requirement by JPA for each ship to fill in this form.

Please return the completed form to:

If by softcopy, e-mail to: [nurulhuda@cheme.utm.my](mailto:nurulhuda@cheme.utm.my) (Mrs. Nurul Huda Zamzuri, UTM) and cc to [Rukiah@ptp.com.my](mailto:Rukiah@ptp.com.my) (Mrs. Rukiah Chandra, PTP).

If by hardcopy, send to: Mrs. Rukiah Chandra (PTP), HSE Policy & Systems Section, Health, Safety & Environment Department, HSSE Division, Pelabuhan Tanjung Pelepas, Johor. Tel: +607-5042222.

Date: 28 OCTOBER 2015

Date of Arrival into Port Limit: 28 OCTOBER 2015

Vessel Name	EVER ALLY	Call Sign	3FTK6	Vessel Type	CONTAINER
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#### Machinery Overview

Maximum Speed, knots	18.7	Top Engine RPM, RPM	135
Service Speed, knots	16.5	Deadweight (DWT)	15,605.79
		TEU (for Container only)	1,164

#### Machinery Detail

##### Main Engine Specifications

Total Installed Engine Power, kW:	11066
Engine Type: Please tick (✓) at the selected type:	<input type="checkbox"/> Slow Sped Drive (SSD) <input checked="" type="checkbox"/> Medium Speed Drive (MSD) <input type="checkbox"/> High Speed Drive (HSD)

##### Auxiliary Engine Specifications

No. of Auxiliary Engine	Total Installed Engine Power, kW	Total Auxiliary Engine Power Used in each mode, kW			
		Anchorage	Berthing	At Wharf	Unberthing
Auxiliary Engine 1	880				
Auxiliary Engine 2	880	240	300		500
Auxiliary Engine 3	880		300	250	300
Auxiliary Engine 4	880	250	400	160	400
Auxiliary Engine 5					
Auxiliary Engine 6					

# ESTABLISHMENT SHIP DATABASE



## SURVEY FORM

### MANDATORY INFORMATION FROM JOHOR PORT AUTHORITY

Version 5

#### Activities Data

Duration of Anchorage, hours	10.4	Duration of At Wharf, hours	12.0
Duration of Berthing, hours	1.9	Duration of Unberthing, hours	2.0

#### Fuel Usage Data

##### Definition

Residual Oil (RO): It is the heaviest fraction of the distillation of crude oil with high concentration of pollutants (e.g. sulphur).

Three types of RO:

1. Heavy Fuel Oil (HFO)
2. Intermediate Fuel Oil (IFO)
3. Marine Fuel Oil (MFO)

Marine Distillate Oil (MDO): It mainly consists of distillate oil and has lower sulphur content than RO.

Marine Gas Oil (MGO): It is pure distillate oil and has the lowest sulphur content.

Please tick (✓) at the selected Type of Fuel used in Port area and state the Sulphur Content (% S) & the Fuel Consumption in Port Area, tonne.

Engine Part	Type of Fuel Used ONLY in Port Area			Sulphur Content (%S)	Fuel Consumption in Port Area, tonne. <i>From starting time of Anchorage to completion of Unberthing.</i>
Main Engine	<input checked="" type="checkbox"/> RO	<input type="checkbox"/> MDO	<input type="checkbox"/> MGO	2.24	2.1
Auxiliary Engine	<input checked="" type="checkbox"/> RO	<input type="checkbox"/> MDO	<input type="checkbox"/> MGO	2.24	3.2
Boiler	<input checked="" type="checkbox"/> RO	<input type="checkbox"/> MDO	<input type="checkbox"/> MGO	2.24	2.3

#### CONTACT PERSON ON BOARD

Name : .....

Email : .....

Contact No: .....

#### CONTACT INFORMATION FOR VESSEL AGENT

Name : .....

Email : .....

Contact No : .....





# EXCEL TOOLS CALCULATION

LPJ SHIP EMISSION CALCULATOR



DATE

PORT

VESSEL NAME   
 CALL SIGN   
 VESSEL TYPE

### Machinery Overview

MAXIMUM SPEED,knots	<input type="text"/>
SERVICE SPEED,knots	<input type="text"/>
TOP ENGINE RPM,rpm	<input type="text"/>
DEADWEIGHT, t	<input type="text"/>
TEU (for container only)	<input type="text"/>

### Activities data

Duration of Anchorage, hours	<input type="text"/>
Duration of Berthing, hours	<input type="text"/>
Duration of At Wharf, hours	<input type="text"/>
Duration of Unberthing, hours	<input type="text"/>



### Fuel Usage Data

Engine Part	Type of Fuel Used ONLY in Port Area	Sulphur Content (% S)	Fuel Consumption in Port Area, t
MAIN ENGINE	<input type="text"/>	<input type="text"/>	<input type="text"/>
AUXILIARY ENGINE	<input type="text"/>	<input type="text"/>	<input type="text"/>
BOILER	<input type="text"/>	<input type="text"/>	<input type="text"/>

### Machinery Details

#### Main Engine Specifications

Total Installed Engine Power, kW	<input type="text"/>
Engine Type	<input type="text"/>

#### Auxiliary Engine Specification

No. of Auxiliary Engine	Total Installed Engine Power,kW
Auxiliary Engine 1	<input type="text"/>
Auxiliary Engine 2	<input type="text"/>
Auxiliary Engine 3	<input type="text"/>
Auxiliary Engine 4	<input type="text"/>
Auxiliary Engine 5	<input type="text"/>
Auxiliary Engine 6	<input type="text"/>

MODES/ACTIVITIES	TOTAL AUXILIARY ENGINE POWER USED IN EACH MODE/ACTIVITIES,kW
ANCHORAGE	<input type="text"/>
BERTHING	<input type="text"/>
AT WHARF	<input type="text"/>
UN-BERTHING	<input type="text"/>

GO TO EMISSION RESULT

GO TO GRAPHICAL VIEW

**TRANSFER DATA**

GO TO TABLE SHEET

GO TO TOTAL MAIN ENGINE EMISSIONS

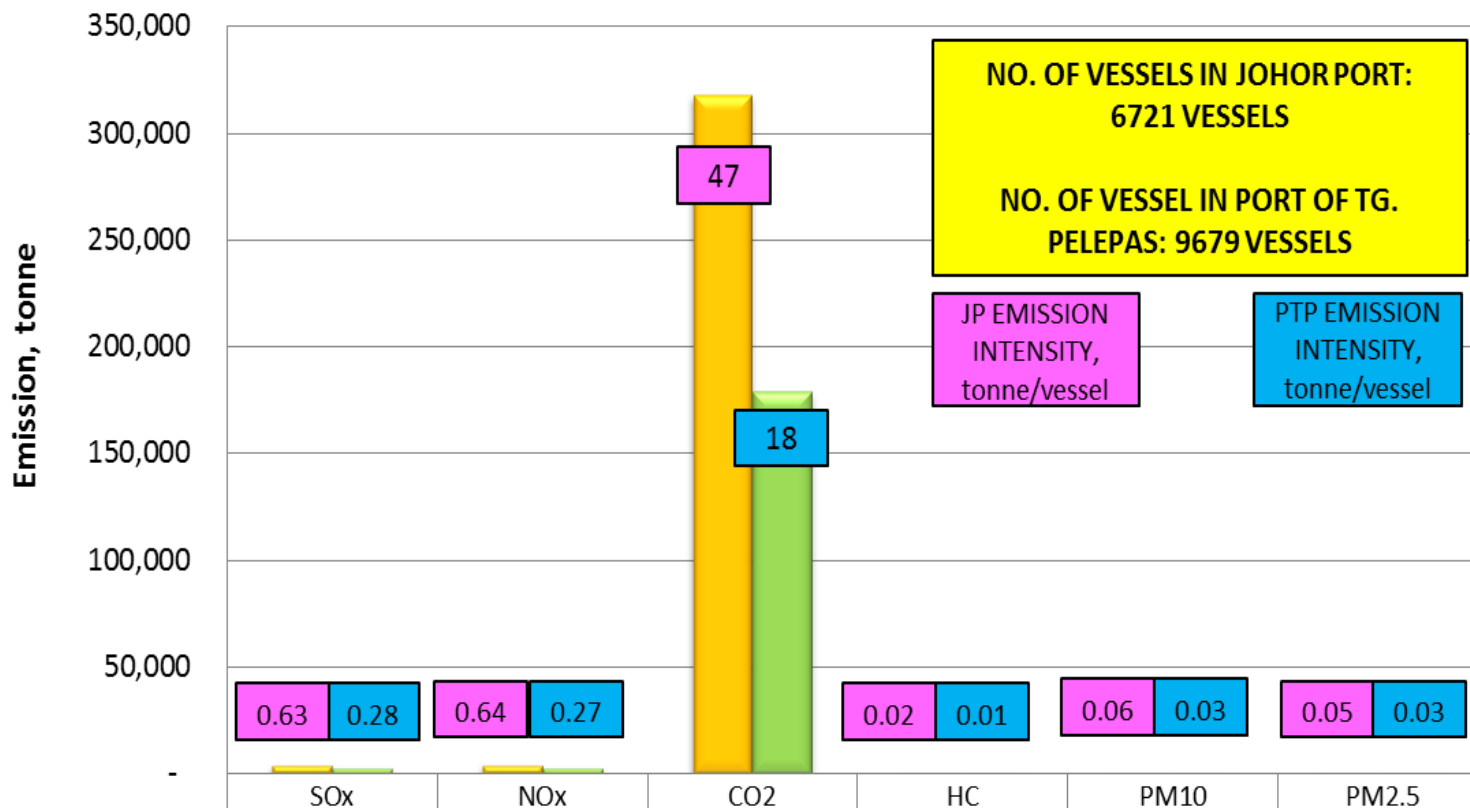
GO TO TOTAL AUXILIARY ENGINE EMISSIONS

GO TO TOTAL BOILER EMISSIONS

GO TO TOTAL EMISSIONS

# JPA GREEN INITIATIVES

## EMISSION FOR BOTH PORTS IN 2014

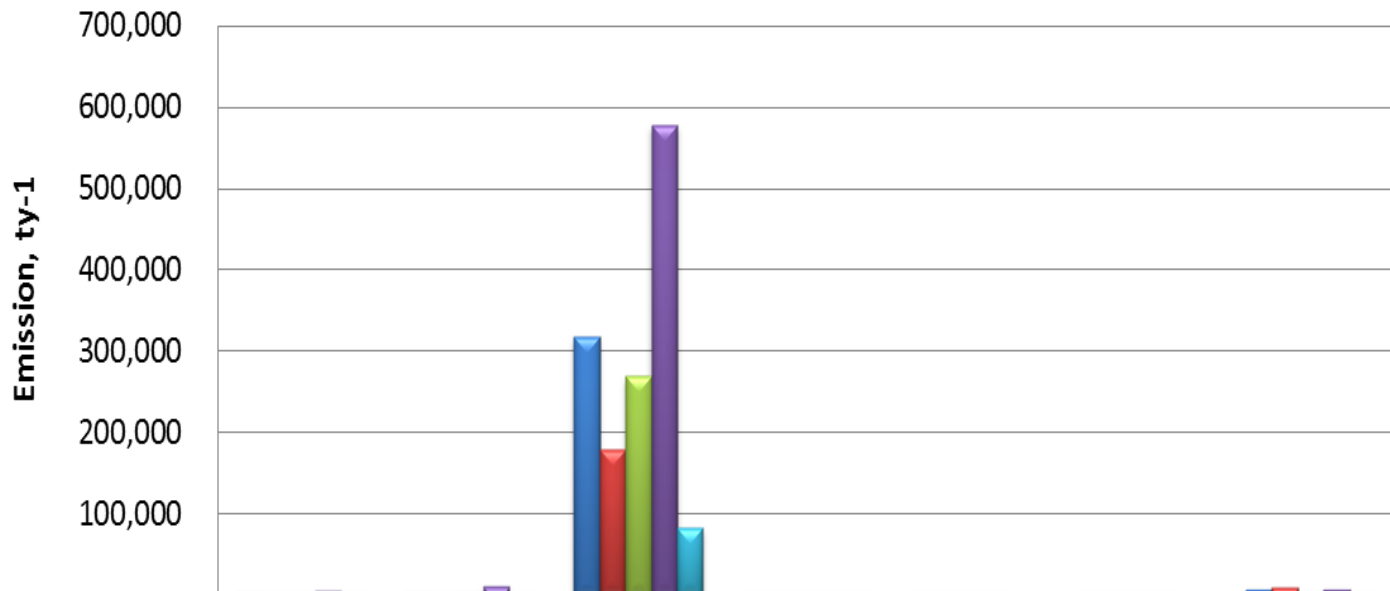


■ JOHOR PORT	4,204	4,302	318,060	134	388	362
■ PORT OF TG. PELEPAS	2,692	2,588	178,594	79	261	243

# JPA GREEN INITIATIVES

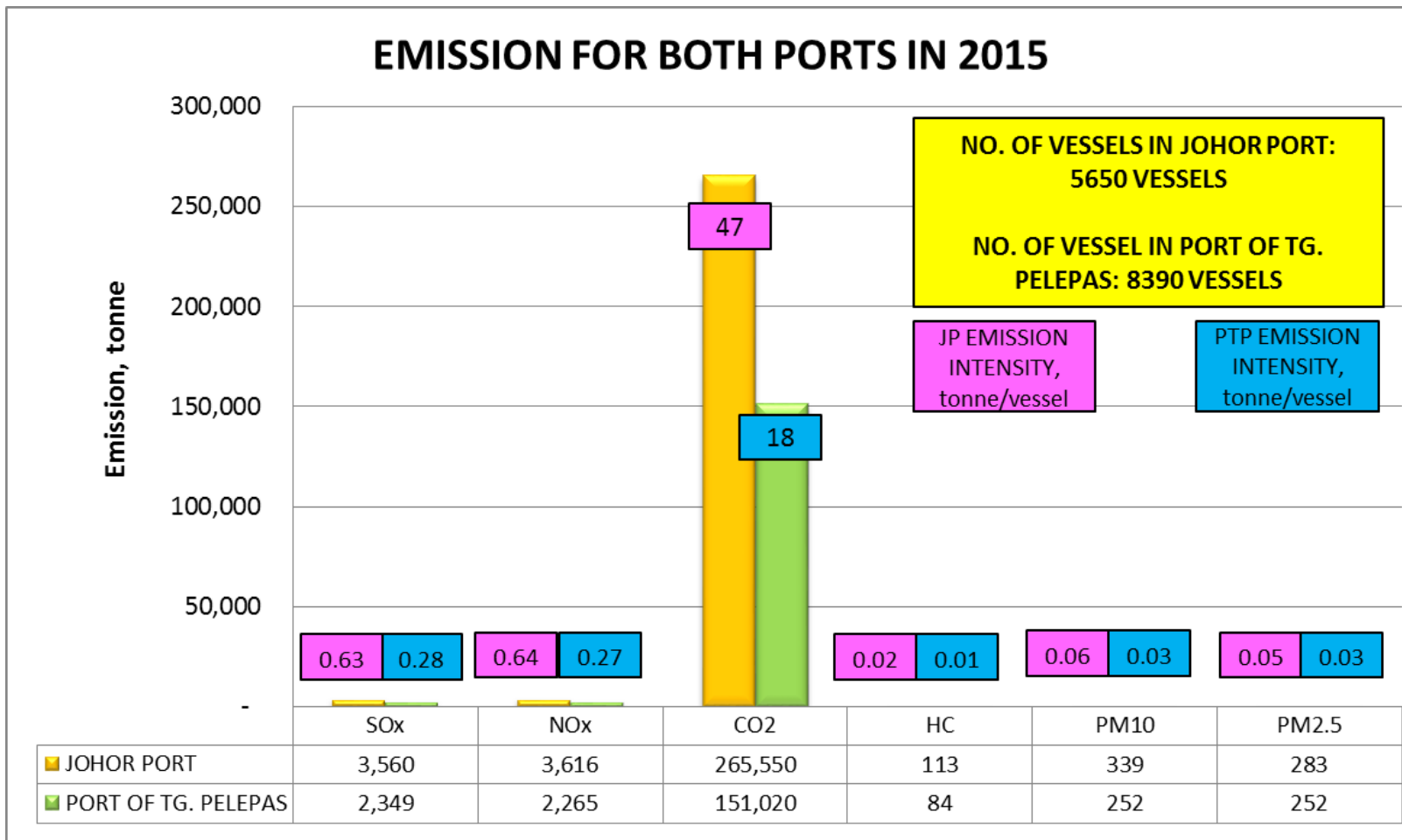
## 2014

### TOTAL EMISSIONS COMPARISON WITH OTHER PORTS



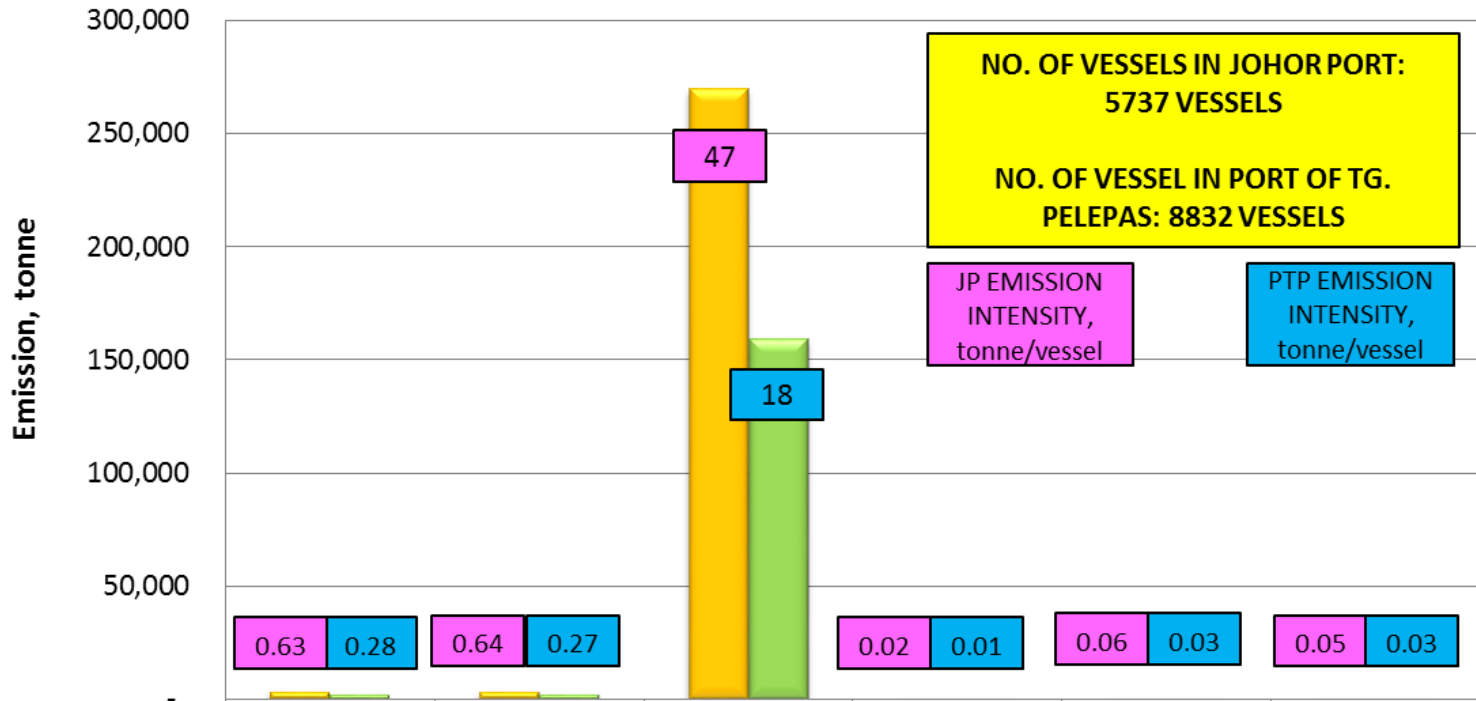
	SOx	NOx	CO2	HC	PM10	PM2.5	NO. OF VESSELS
■ JOHOR PORT	4,204	4,302	318,060	134	388	362	6,721
■ PORT OF TG. PELEPAS	2,692	2,588	178,594	79	261	243	9,679
■ PORT OF LONG BEACH	644	4,258	269,111	219	126	114	1,921
■ YANGSHAN PORT	5,623	10,758	578,444	519	219	859	6,518
■ IZMIR PORT	1,405	1,923	82,753	74			2,086

# JPA GREEN INITIATIVES



# JPA GREEN INITIATIVES

## EMISSION FOR BOTH PORTS IN 2016



**NO. OF VESSELS IN JOHOR PORT:  
5737 VESSELS**

**NO. OF VESSEL IN PORT OF TG.  
PELEPAS: 8832 VESSELS**

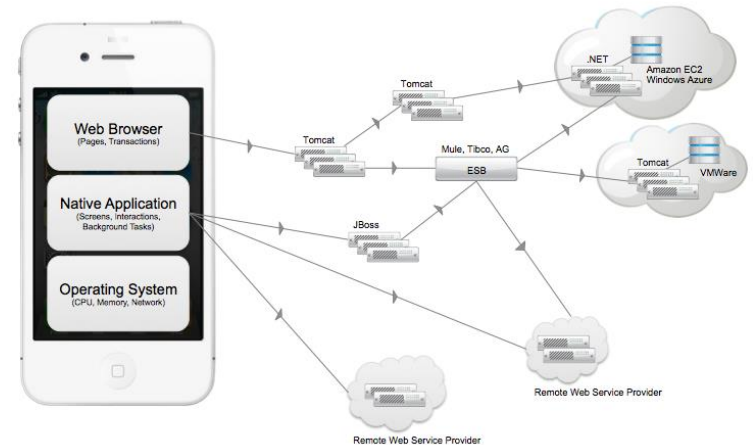
**JP EMISSION  
INTENSITY,  
tonne/vessel**

**PTP EMISSION  
INTENSITY,  
tonne/vessel**

	SOx	NOx	CO2	HC	PM10	PM2.5
■ JOHOR PORT	3,614	3,672	269,639	115	344	287
■ PORT OF TG. PELEPAS	2,473	2,385	158,976	88	265	265

# JPA GREEN INITIATIVES

## DEVELOPMENT OF ONLINE SYSTEM: SHIPPING EMISSIONS ACCOUNTING (SEA) & EMISSIONS IMPROVEMENT MEASURES (EIM)





# RESEARCH BACKGROUND



DEVELOPMENT OF ONLINE SYSTEM:  
SHIPPING EMISSIONS ACCOUNTING (SEA)  
&  
EMISSIONS IMPROVEMENT MEASURES (EIM)



01 Apr – 31 Dec 2016



To develop an online software to  
account the shipping emissions and  
analyse the emissions  
improvement measures in port  
area



# JPA GREEN INITIATIVES

## Ship Emission Management System (SEMS)

The screenshot shows the SEMS web application interface. At the top, there is a navigation bar with the SEMS logo and a search bar. A green notification banner at the top center reads "success You have been successfully logged in." Below this, a welcome message says "WELCOME TO SHIP EMISSION CALCULATOR". The main content area features a banner with the SEMS logo and logos for UTM (Universiti Teknologi Malaysia) and PROSPECT (Port of Tanjung Pelepas). Below the banner, a paragraph explains that JPA and UTM are conducting a study to estimate emissions due to ship arrival and departure in ports/terminals. A table titled "Today Feeds" is visible, with columns for PORT, # VESSEL, # ENTRIES, SO<sub>x</sub>, NO<sub>x</sub>, CO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and HC. At the bottom, there are "Metrics Today" sections for SO<sub>x</sub>, NO<sub>x</sub>, and CO<sub>2</sub>, each showing a "Total" value.

The screenshot shows the SEANEIM login page. At the top, there is a logo for SEANEIM (Ship Emission Calculator And Emission Improvement Measures). Below the logo, there are two input fields: "E-mail / Username" and "Password". A "Login" button is positioned below the password field. At the bottom of the page, the copyright notice reads: "Copyright (c) 2016 IJTHAD TECHNOLOGY SDN BHD. All rights reserved."

- To account the shipping emissions (SEMS & iOS Application).
- To analyses the emissions improvement measures in port area.

# IMPLEMENTATION..

SEMS  
Ship Emission Management System

Find reports and more

success You have been successfully logged in.

Admin LPJ

WELCOME TO SHIP EMISSION CALCULATOR

LEMBAGA PELABUHAN JOHOR

SEMS  
SHIP EMISSION MANAGEMENT SYSTEM

UTM  
UNIVERSITI TEKNOLOGI MALAYSIA  
RESEARCH UNIVERSITY

PROSPECT  
Engineering Sustainability

JOHOR PORT AUTHORITY (JPA) is the regulatory body for major ports in Johor covering Johor Port Berhad (JPB), Port of Tanjung Pelepas (PTP) and other related terminals. JPA and Universiti Teknologi Malaysia (UTM) are conducting a study to estimate the emissions due to ship arrival and departure in ports/terminals due to the requirement of MARPOL CONVENTION Annex VI, Prevention of Air Pollution by Ships, which Malaysia is already rectified. To enable this, JPA requires the information on your ship's engine specifications and fuel consumption ONLY IN THE PORT AREA. It is a MANDATORY requirement by JPA for each ship to fill in this form.

Today Feeds

PORT	# VESSEL	# ENTRIES	SO <sub>x</sub>	NO <sub>x</sub>	CO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	HC
------	----------	-----------	-----------------	-----------------	-----------------	------------------	-------------------	----

Metrics Today

NaN % SO<sub>x</sub>

Total:

NaN % NO<sub>x</sub>

Total:

NaN % CO<sub>2</sub>

Total:

☐ 01 MAC 2017

✓ DISCUSSION WITH PILOT JPB & PTP

☐ 09 MAC 2017

✓ DISCUSSION WITH JPSFA, JOFFA, SAM, MASA

☐ 31 MAY 2017

✓ TRAINING SESSION

☐ 01 JULY 2017

✓ SEMS IMPLEMENTATION



# IMPLEMENTATION..



**LEMBAGA PELABUHAN JOHOR**  
JALAN MAWAR MERAH 2, PUSAT PERDAGANGAN PASIR GUDANG 2  
81700 PASIR GUDANG, JOHOR DARUL TA'ZIM



Rujukan : LPJ/IP/OPS/24JLD3(5)

Tarikh : 16/05/2017

## NOTIS PELABUHAN BIL. 47 / 2017

LEMBAGA PELABUHAN JOHOR

Kepada : Operator Pelabuhan, Pemilik Kapal,  
Master Kapal, Pemilik Jeti Persendirian,  
Syarikat Perkhidmatan Pengendalian,  
Agen Perkapalan, Persatuan Dan Semua  
Peguna Pelabuhan.

Perkara : Pelaksanaan "Ship Emission  
Management System (SEMS)".

Tarikh Berkuatkuasa : 01 Julai 2017

Perkara di atas di rujuk.

2. Notis ini memberi makluman terhadap pelaksanaan "*Ship Emission Management System (SEMS)*" di dalam had perairan Pasir Gudang dan Tanjung Pelepas.

3. Tujuan utama pelaksanaan sistem ini adalah bagi mendapatkan jumlah *emission* (CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub> & PM<sub>2.5</sub>) yang di lepaskan oleh setiap kapal yang beroperasi di dalam kawasan pelabuhan. Pelaksanaan ini adalah selari dengan Polisi Pelabuhan Hijau LPJ dan pematuhan kepada keperluan MARPOL Annex VI berkaitan "*Regulations for prevention of air pollution from ships*".

4. Oleh yang demikian, setiap kapal yang memasuki dan beroperasi di dalam had perairan Pasir Gudang dan Tanjung Pelepas perlu mengemukakan maklumat yang di perlukan oleh pihak LPJ, pilot dan agen perkapalan bagi pengiraan *emission* melalui SEMS.

IBU PEJABAT (PASIR GUDANG) : 07-253 4000 (TEL.)  
07-251 7854 (FAKS)  
PEJABAT PERHUBUNGAN LPJ (TG. PELEPAS) : 07-507 1978 (TEL.)  
07-5071978 (FAKS)  
TERMINAL FERI CHANGI, SINGAPURA : 02-6545 3230 (TEL.)  
02-6545 3231 (FAKS)  
LAMAM WEB : <http://www.lpj.gov.my>  
email: [admin@lpj.gov.my](mailto:admin@lpj.gov.my)

5. Sebarang pertanyaan lanjut berkaitan pelaksanaan SEMS ini boleh di ajukan kepada pegawai di bawah:

Nama : En. Mohd Zahari Bin Mohd Rusjuna

Jawatan : Pengurus SHE

No. Telefon : 07-2534052

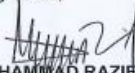
No. H/p : 019-7905879

Email : [zahari@lpj.gov.my](mailto:zahari@lpj.gov.my)

Sekian, terima kasih.

"PROFESIONALISME MEMANTAPKAN PERKHIDMATAN"

Yang Benar,

  
(MUHAMMAD RAZIF BIN AHMAD)  
Pengurus Besar  
Lembaga Pelabuhan Johor

No Kotak: No Dokumen: 168554

No Dokumen : 168554

2



# THANK YOU



**LEMBAGA PELABUHAN JOHOR**  
PROFESIONALISME MEMANTAPKAN PERKHIDMATAN

For enquire please contact :



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Johor Port Authority