Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC)

Atomic Energy Licensing Board (AELB)

Role of Investigation and Legal Prosecutions in Nuclear Security

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1. COMPETENT AUTHORITY IN NUCLEAR SECURITY

NUCLEAR LAW

- Atomic Energy Licensing Board (AELB)
- Ministry of Health (MOH)

TRADE LAW

- Royal Malaysia Customs (RMC)
- Ministry of Industrial and International Trade (MITI)

SECURITY LAW

- Royal Malaysia Police (RMP)
- National Security Council (NSC)

INTERNATIONAL LAW AND OBLIGATION

- Ministry of Foreign Affairs (MOFA)
- Atomic Energy Licensing Board (AELB)

2. Nuclear Security Goals

3. Observations - Prosecutions and Penalties

Cases	Offences	Fines (RM)
Theft	Regulation 70 of the Atomic Energy Licensing (Basic Safety Radiation Protection) Regulations 2010 and punishable under Section 40(2) of the Atomic Energy Licensing Act 1984 [Act 304]	60,000 (Licensee)
Missing	Regulation 64(1) of the Radiation Protection (Transport) Regulations 1989 and punishable under Section 40(2) of the Act 304	8,000 (Suspect 1) 8,000 (Suspect 2)
Illegal Import	Section 12(1)(b) of the Act 304 and punishable under Section 40(2) under the same Act	15,000 (Non Licensee)

4.1 MORC Cases in Malaysia - Border

- 17 cases border detection (2019)
- 16 cases took place within the interior of the state (2019)

4.2 MORC Cases in Malaysia - Border

Date	Location	Origin	Good Description	Finding Suspected Radioactive/ Isotope	Action
29 Mac 2011	PTP Johor (import)	Japan	Motor for vacuum cleaner	Cs-137	Goods shift to another container and the contaminated container send to dangerous goods area for cleaning
4 April 2011	PTP Johor (import)	Japan	Food stuff	Cs-137, Cs-134	Goods shift to another container and the contaminated container send to dangerous goods area for cleaning
5 April 2011	PTP Johor (import)	Japan	Empty container	Cs-137	Contaminated container send to dangerous goods area for cleaning
11 July 2013	Port Klang (import)	Japan	Used auto prime mover and part	Cs-137, Cs-134	Return to Japan
15 April 2014	Port Klang		Liquid elevator	Co-60	Return to country of origin
8 Nov 2015	Port Klang		Zin ores	Cs-137	Return to country of origin
17 August 2016	Port Klang		General	Cs-137	Return to country of origin
30 Oct2016	Port Klang		Babies clothes	U-235, U-232, U-238, Th-232	Return to country of origin
1 Feb 2018	Port Klang		Furniture etc	U-232	Return to country of origin

4.3 MORC Cases in Malaysia - Interior

Num.	Events/ Location	Year	
1.	Sources Theft (Industrial Radiography) / Kuantan	1990s	
2.	Missing Sources (Industrial Radiography) / Taiping	1990s	
3.	Sources Storage Intrusion (Industrial Radiography) / Kemaman	2001	
4.	Sources Storage Intrusion (Industrial Radiography) / Miri	2004	
5.	Sources Storage Intrusion (Industrial Radiography) / Kemaman	2006	Found in 2009
6.	Missing Sources (Oil Logging) / Kemaman	2007	
7.	Sources Theft (Industrial Radiography) / Sibu	2008	Found
8.	Sources Theft (Industrial Radiography) / Paka	2009	Found
9.	Missing Sources (Industrial Radiography) / Paka	2011	N.Found
10.	Sources Theft (Industrial Radiography) / Paka	2012	N.Found
11.	Sources Theft (Gauging) / Pasir Gudang	2012	N.Found
12.	Lost Sources (Oil Logging) / Labuan	2014	N.Found
13.	Lost Sources (Industrial Radiography) / Kimanis	2014	N.Found
14.	Unauthorized Possession (Unknown-DU) / Kuala Lumpur	2015	Found
15.	Sources Theft (Gauging) / Kemaman	2016	Found
16.	Sources Theft (Industrial Radiography) / Klang	2017	Found

Source: AELB-Rekod Fail Pemegang Lesen

4.4 MORC Detection Mechanism – Equipment and Information

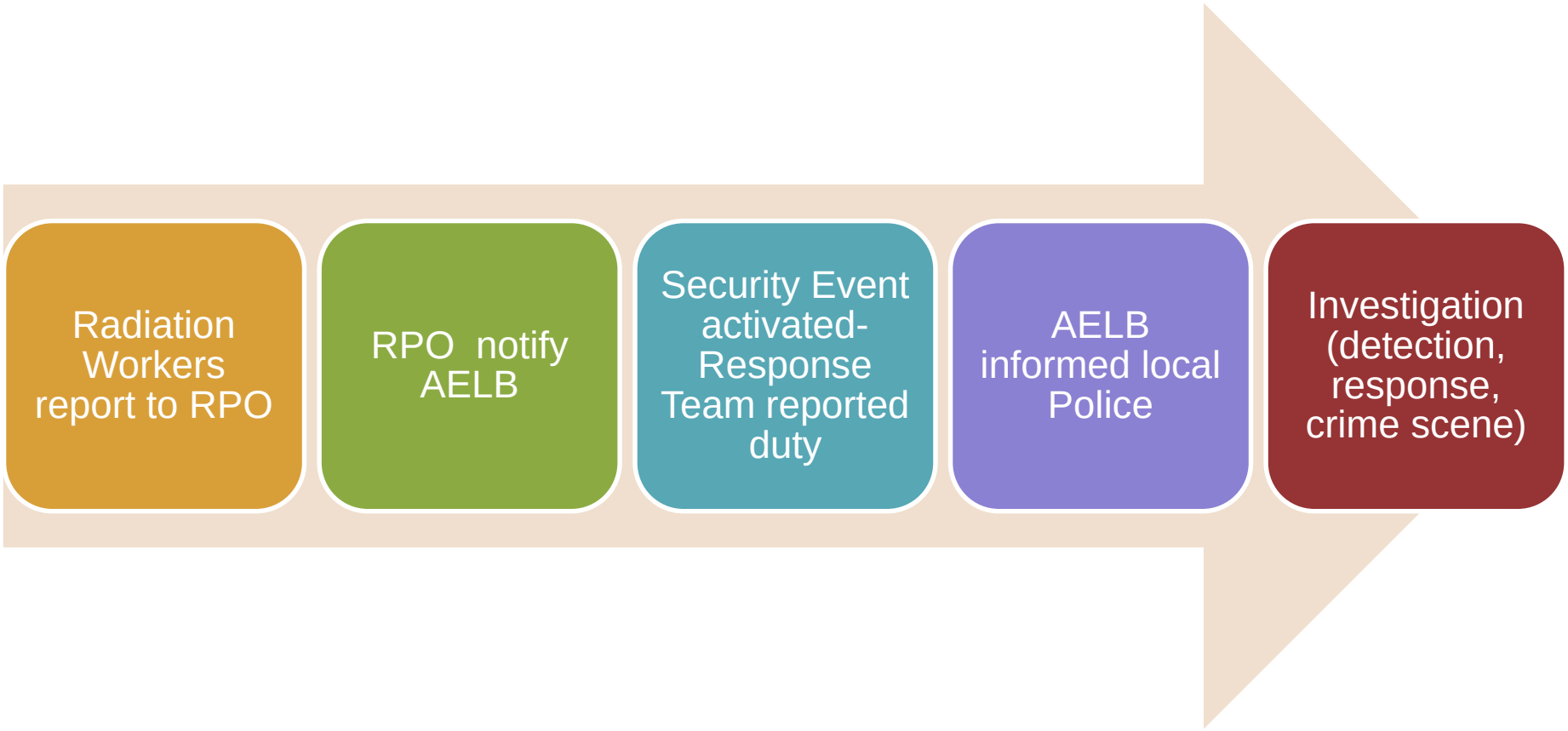
CASE PROFILE 1 : MSKU 2284494

Date : 29 June 2010
Location : Northport
RPM : Lane 217
Reading : Gamma :14.5 sigma
Neutron :385 cps
(count per second)

Container Origin : Senegal
Final Destination : Port Klang
Good Description : Steel Scrap Iron
(exposed to radiation source)

Secondary Inspection Report
Inspection Date : 30 June 2010
Findings : Isotope Cf 252 (Californium 252) and Am 241 (Americium 241).
Referred to AELB
AELB : confirmed report on 9 July 2010 / advised returned to the origin country
Date Returned : 30 July 2010 at 2.30 am, the container was sent back to Senegal

5.1 FLOW OF EVENT INVESTIGATION



AELB's Investigations

Activated Respond Team (ALFA)
- Group assignment
- Scheduled: 4 – 5 pax / group rotation
- Reporting

Coordinate with local authorities
- Police – scene investigations/ escorts
- Health – radiation syndrome sickness
- Municipal Council – public affairs assistance (area cleaning, escorts)
- Local Head of Communities (+ member of Parliament) – areas information and public outreach

Responsible Licensees
- Interview session (workers, RPO, management)
- Special inspection

Searching Activities
- Areas within storage vicinity
- Scrap dealers
- Other companies
- Risky areas (upon information)
- Patrolling

Awareness
- Public interviews/ talks
- Flyers/ Brochures on orphan source
- Media
- Other stakeholders

5.2 Measures of Investigations

5.3 Risk of Investigations

Reference: missing case in August 2018 - 554 premises have been inspected/ investigated

5.4 Join Investigation

Source: AELB-Rekod Fail Pemegang Lesen

5.5 Challenges in Conducting Investigation - Detection Cases

- Time at entry point is money.
- Involved more that one commodity.
- Insufficient information to take early course of action.
- Most are non-licensed holders.
- Safety of investigation team.
- Interruption to trade.

5.6 Challenges in Conducting Investigation – Interior Cases

- Delayed reporting.
- Seal sources hard to detect.
- Wide area of searching.
- Human resources and detection assets.
- Safety of investigation team.

5.7 Outweighing Estimated Financial Loss

Court Fine

RM 60,000

VS

Total Cost Involved

RM 294K

Reference: theft case in Feb 2017

5.8 Outweighing Non-Financial Loss

NEWS

Fatal Radioactive Device Lost Along Seremban-Shah Alam, Fear It Gets Into Wrong Hand

wanxiang | August 20, 2018

'IRIDIUM-192 THEFT A WAKE-UP CALL'

Radioactive material highly sought after by IS to make dirty bombs, says expert

C. PREMANANTHINI AND FERNANDO FONG
KLANG

A SECURITY expert has cautioned that the theft of equipment, which contained canisters of radioactive material from an oil and gas exploration company here, could be more than what meets the eye.

Counterterrorism specialist Andrin Raj said yesterday the radioactive material — Iridium 192 — was highly sought after by terror groups such as Islamic State, which use it to make dirty bombs.

He said the Chemical, Biological, Radiological, Nuclear, Explosives (CBRNe) threat was new in Southeast Asia.

"For some years, there was only talk of the threat in Southeast Asia.

"This (CBRNe) threat is (now) the region's new threat.

"The Iridium 192 found in Klang is a worrying sign that Malaysia is becoming a major transit point and base for religious and violent extremists.

"This discovery by the authorities is a wake-up call for Malaysia as Iridium 192 is easily found here and not in other Asean countries," he told the *New Straits Times*.

Residents of Seri Era Apartment, where materials containing Iridium 192 were found on Saturday, have been advised to seek medical attention.

Atomic Energy Licensing Board (AELB) Radiation, Regulatory Division director Hasmadi

(Top) Seri Era Apartment in Klang, where some canisters containing Iridium 192 were recovered. (Right) The equipment used by police and the Atomic Energy Licensing Board to find the radioactive material.

projectors were found dismantled in the area.

AELB is concerned that radioactive metal

Dirty bomb terror fears as RADIOACTIVE device goes MISSING

A RADIOACTIVE device which could spread dangerous contamination if taken apart incorrectly has gone missing in Malaysia.

Share Tweet 15 SHARES

ul Harper / Published 21st August 2018

The industrial device vanished from a pick up truck on August 10 sparking a major search by the

LATEST NEWS

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THE Queen and Prince Philip have been snubbed from Prince Charles' official birthday pictures.

James Bulger killer Robert Thompson says tot's murder gave him a 'BETTER life'

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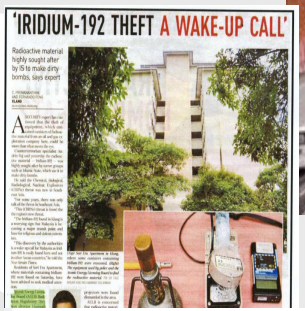
Longer wait to enter Singapore due to security checks for missing radioactive device

By THE STAR | 25 August 2018

6. Motivation on Investigation and Legal Prosecutions



Inflicting Events

- **Government commitments**
- **Public assurance**
- **Company's reputation**
- **International transparency**
- **Workers awareness**
- **Lesson learned to enhance effectiveness**

Enhanced Security Control and Measures

7. National and International Roles

- ✓Clear and updated SOP is critical.
- ✓Exchange of information is vital (nationally/ internationally).
- ✓Pool of equipment support regional support helps operation.
- ✓Harmonize and equal efforts by all must be promoted.

AELB ATOMIC ENERGY LICENSING BOARD
NUCLEAR SECURITY SUPPORT CENTRE MALAYSIA
NSSC Malaysia

Feel Safe, Secured and Safeguarded

Thank You

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