

- Pahang Bar -

**JAWATANKUASA PILIHAN KHAS MENGENAI PROJEK
LYNAS ADVANCED MATERIALS PLANT (LAMP) YANG
BERTEMPAT DI KAWASAN INDUSTRI GEBENG,
KUANTAN, PAHANG DARUL MAKMUR**

**CADANGAN/SYOR-SYOR JAWATANKUASA PEGUAM
NEGERI PAHANG PADA 10HB. MEI, 2012**

SUBMISSIONS BY THE PAHANG BAR COMMITTEE TO THE PARLIMENT SELECT
COMMITTEE ON LYNAS

1. Introduction

- a. Pahang Bar Committee at its EGM in 2011 resolved that a committee be formed to do all things necessary to look into the safety aspects of LAMP.

- b. LAMP would be the biggest rare earth processing plant in the world which at its peak would produce 20 % of the world's production of rare earth minerals of 22,000 tonnes per annum. The **solid wastes** to be discharged from LAMP is as follows (ie 145,000 tpa averaging 13.9 Bq/gm):-
 - i. 32,000 tpa water leach purification (WLP) 62 Bq/gm;
 - ii. 27,900 tpa flue gas desulphurization (FGD) 0.47 Bq/gm;
 - iii. 85,000 tpa tpa neutralization underflow solid waste (NUF) 0.25 Bq/gm;
 - iv. Sludge from water treatment plant – NA (1.1 Bg/gm).

See: **page 16 of the IAEA report in the Rules/Regulations File.**

ie page 4 of the Bundle of Documents ("BOD").

- c. Malaysians have fundamental rights enshrined in the Malaysian Federal Constitution ie the right to life and livelihood, of equality before the law

and against discrimination and the right to property or compensation for deprivation of enjoyment of property.

See: Articles 5, 8 & 13 of the Federal Constitution, the Federal Constitution being the Supreme Law of the Federation. See Article 4.

- d. The NGOs ie SMSL/SLC/Badar, Pahang Bar Committee, MMA, CAP-SAM and other individuals etc submitted their comments to AELB within the period allotted, voicing their objections to the issuance of a TOL to Lynas Malaysia.

AELB within two working days of receiving 1,123 comments and submissions approved the TOL with conditions!

See: SMSL/SLC, Pahang Bar Committee, MMA, CAP-SAM, Mat Azhar, Mr. Ng Boon Chong (Engineer) comments and objections in the Comments/Submissions File.

See: CAP-SAM SUBMISSIONS at pg. 10-25 of the BOD.

2. Proposals and the Grounds thereof:-

3. The Decision of the AELB shows that the submissions of the NGOs abovestated has not been taken into account and as such contravened Recommendations 8, 9 and 10 of the IAEA Report (at pages 5 & 6 IAEA Report. File:Rules/Regulations ie pages.2 & 3 BOD.

Appeal Regulations in File: Rules/Regulations.

4. The AELB erred when it did not impose a condition for the **identification of the location for an approved Permanent Disposal Facility before** the submission of the application for a TOL by Lynas.

Application for a Temporary Operating License was made under the Radiation Protection (Licensing) Regulations 1986 ("**licensing Regulations**"). **Regulation 23 (2) of the Licensing Regulations (pages 26 BOD)** and **pages 20-21 of the IAEA (pages 8 & 9 BOD)** report mandated and implied that the identification of a permanent deposit facility be first made. The claim that the radioactive wastes can be recycled and would have a commercial usage has not been shown by the **RWMP** and the **Safe Case for Radioactive Wastes Disposal ("SCRWD")** documents. In fact Dato' Marshal Ahmad of Lynas (CEO of Lynas) admitted that until now they have yet to have a commercial usage for the wastes (**pages 27-28 BOD**). The Director General of AELB had said last year ie 19-4-2011 that they would not approve a TOL unless there is a parallel process in which the wastes would be utilized or reduced or disposed off. CAP-SAM comments at pages 7-9 show quite clearly how this contravened the recommendations of the IAEA report (**pages 16-18 BOD**). A chinese expert at the recently concluded symposium on Rare Earths held in Kuala Lumpur (7-5-2012) ie Mr. Chua-Hua Yan, said that the recycling as suggested by Lynas of the wastes into gypsum, fertilizer and material for road construction is an outdated method and has long since been abandoned as it has been shown to be a failure in China.

Please also note that under regulation 17 of the Environmental Quality (Sewage and Industrial Effluents) Regulations, 1979, there is a prohibition of dilution of effluent.

See: Regulation 23 (2)(a), (b) and (c) of the licensing Regulations 1986.

See: IAEA Report. File: Rules/Regulations.

See: Newspaper cuttings under File: LynasNews ie Lynas Paints.

See: RWMP/ SCRWD: File:RWMP.

See: CAP-SAM comments File:Comments/Submission.

5. The AELB erred when it did not enquire and require that the Detailed Environmental Impact Assessment Procedure was to be applied to LAMP:

a. It has been brought to the attention of the AELB vide the comments submitted that the activities which required a Detailed EIA procedure has come into force since 20th. June, 2011. The AELB failed to exercise its discretion under s.31 of the Act to consult with the DG of Environmental Quality as to whether the DEIA procedure was adhered to or mandated and the reasons thereof.

See: 1987 ie Schedule 2 Environmental Quality Activity (Prescribed Activities) (EIA) Order & 4. See File: DEIA. Page 29 BOD.

See: s.31 of the Atomic Energy Licensing Act. Page 30 BOD.

b. Only a Preliminary EIA was done. But PEIA and DEIA are not mutually exclusive. When during the PEIA, it is contemplated that there are

other issues like health, social and economic issues to be dealt with, then a DEIA procedure should have been followed.

See: Professor Jamal comments emailed in the DEIA File.

Page 31-33 BOD.

See: File Comments by Mat Azhar in BM.

6. The AELB failed to require a fresh Radiological Impact Assessment report to be done before considering the application for a TOL by Lynas.

The RIA is based on lab tests and based on data presented by Lynas. This is admitted in the RIA itself. Hence the conclusions in RIA report is that the figures within the RIA document is to be rechecked upon operation. The IAEA report itself state that a fresh RIA is needed. The Director General of AELB on the 16th. June, 2011 has come forward and said that a fresh and new RIA needed to be done. None was done.

See: ~~Radiological Impact Assessment Report~~. Eg. See: Pages 34-35 BOD.

See: page 21 IAEA report in the File: Rules/Regulations. Page 9 BOD.

See: Statement of Dr. Lee Chee Hong and his reports enclosed there in the Dr. Lee Chee Hong's file. All Lynas documents are based on lab tests; there is no pilot plant. Pages 36-51 BOD. This is admitted by Lynas.

See: All documents in File: MunKit.

7. The AELB failed to require a Health Impact Assessment ("HIA") report to be done prior to approval.

The failure of the AELB to obtain a fresh RIA to be done despite promising that one needed to be done, and later having noted from the RWMP and Safety Case reports that there is no commercial viable usage of the radioactive wastes, any reasonable person would have mandated a HIA. Unfortunately, one was not done for LAMP despite the fact that LAMP would be churning out 145,000s of tpa of radioactive solid wastes and the potential chemical pollution from the following utilization of chemicals:-

- i. Sulphuric Acid : 112,238 tpa (Lowers pH & acid rain);
- ii. Hydrochloric Acid : 146,774 tpa (Chlorine, bleach, destroy plant life, acid rain) ;
- iii. Magnesium Oxide : 23,348 tpa (Heavy Metal);
- iv. Barium Chloride: : 602 tpa (Barium & Chlorine, bleach, destroy plant life);
- v. Sodium Carbonate : 19,632 tpa (Hardens water, source of CO₂);
- vi. Sodium Hydrozide : 81,120 tpa.

See: IAEA report. File: Rules/Regulations.

See: Prof Jamal Hisham letter to the Editor dated 29th. Feb, 2012 in File: DEIA. Pages 52-53 BOD (very important)!

See: Prof Jamal Report he co-authored ie HIA Guidance Doc: DEIA file.

See: Lee Mun Kit's reports in the Mun Kit's File.

8. The AELB failed to consider the objections by **Malaysian Medical Association on public health concerns** especially on the design of the residual storage facility. This alone would have mandated a HIA to be done.

See: **Written Statement of Dr. Lee Chee Hong.**

See: **MMA comments in the Comments File. Pages 54-57 BOD.**

See: Lee Mun Kit's report and the discharges abovestated. **File: Mun Kit**

See: Expert Report: **"EPA radiogenic risks model"** File:DEIA

9. The AELB failed to consider the current and latest epidemiological studies in Germany (KiKK, 2008) and France (Geocap, 2012) that have reported robust findings of a doubling of leukemia risks for children living less than 5 km from nuclear plant, where radiation exposures were much below the 1 mSv/year "safe threshold". And that this could be due to inhaled or ingested radioactive particulates (Cerrie report, 2004). All these reports should have mandated a HIA to be done. Please see **Prof Chan's testimony in pages 58- 60. BOD.**

See **Written Statement of Professor Dr. Chan in the File:ChanCheeKhoon.**

See: **Germany (KiKK, 2008) and France (Geocap, 2012) reports.**

See: **Cherrie (2004) report.**

See: **Additional Expert Report in File:Expert Report: BEIR.**

10. The AELB failed to note that pursuant to regulation 23 of the licensing regulations, the background of the applicant ie Lynas and the information about the rare earth operations that has been consistently rejected by Australia should have required that a pilot plant be first constructed to verify the various data provided by Lynas and the "actual reasons" why Lynas shifted operations to Malaysia.

See: The Linsmore file which contains the 2010 Australian Govt report and the EIA on Linsmore and the locals objections from Sydney Herald.

Extract of Aust Govt report and Sydney Morning Herald pages 61-62 BOD.

See: The Australian NGO ANAWA objections regarding the leakages now in the ponds in Mount Weld and the pending suit to be filed in the File: MtWeldLatest.

See: The approval of the project for the Secondary Processing Plant at Meenar and the 44 commitments that the operators had to comply with should they want to proceed. (File: LynasMtWeld).

See: The level of transparency and public access and consultation available to the Australian public exercised in the current Mount Weld enrichment plant ie the advertisement required and the feedback period allowed for the public to revert etc. (File: LynasMtWeld)

11. The AELB failed to consider the current reports regarding the **shoddy construction** reported against LAMP by Mr. Keith Bradsher from the New York Times.

For example pages 8-7 of the Preliminary EIA (pages 63-66 BOD) and page 45 of the RIA state categorically that there is an impermeable liner to prevent contaminant from permeating into the ground when in fact most of the process and/or leaching tanks do not have the international standard liner due to the absence of a water proof lining in most of these tanks. (In fact only 6 out of the 22 process and/or leaching tanks has the water proof lining as they were allowed to be left out due to a TQ by the contractor and approved by the supervisor.) As a result the moisture level in the abovestated tanks exceeds 5 % moisture level and caused Akzo Nobel (International Paints) to withdraw their product from being used.

“They have replaced Cardotex (Penang Malaysian company) with a Thailand based company ie Trepax which according to Lynas is going to use the Derakane 411. Derakane 411 is an excellent vinylester but it cannot be applied to concrete with a moisture content above 5 %. However, it seems that they allegedly is getting the liner done with MB100 as a primer to seal the moisture then apply the AkzoNobel system. This is when AkzoNobel withdrew the supply as the adherence between the two systems is unproven.

Whatever the "solutions", the British Standard states that these lining systems (ie corrosions barriers) are not to be placed under mechanical load and their strength is not to be included in the calculations. The MB100 would not be able to bridge the cracks and honeycombs on top of sealing the moisture.

The success of the corrosion barrier depends on excellent adherence to the concrete, the expansion rate of the lining system and the concrete are different, so the inevitable movement created when the tanks are heated (expansion) plus many hundreds of tones of product loaded would eventually cause the lining system to fail and allow the tank contents to reach the already breached concrete." Page 67 BOD.

The Statement by AELB/Mosti that they are going to do a construction audit is not soothing to the ears especially since Trepax is going to give their 2 year warranty and their certified engineers are going to "sign off" on the construction which in the eyes of AELB would suffices. These are useless pieces of papers when the effects of the radiation is realized 10 years down the road. (See Asian Rare Earth File.)

See: Pages 8-7 of the PEIA and page 45 of the RIA.

See: File: NY Times and Reports dated 29th. June, 2011 & 21st March, 2012 by Keith Bradsher.

See File: NYTimes: [Docs to be handed to Minister only if Witness Protection Act applies] and the admitted problems and the photographs of the leaking process tanks.

See: File Lynas Design.

12. The AELB failed to consider that radioactive wastes ie thorium has a half life of 14 billion years and as such there would be remedial works to be done and hence the **appropriate environmental bond** is required and the amount stated by AELB ie RM50 million is grossly inadequate. In the Asian Rare Earth case, Mitsubishi, was required to post a bond of USD\$100 million to treat the waste from the production of 2,000 tonnes of REO for 4 years. Hence the minimum Lynas must be made to post is **USD\$300 million** for each year of production of 22,000 tpa of REO. This is recommendation **5 of the IAEA report. Page 2 BOD. Let it not be forgotten that on full operations, Lynas would obtain a yearly revenue of RM8,000,000,000.00 (ie RM8 Billion) and the Government has given Lynas 12 years tax free status! Let Malaysia not be caught holding the baby when the parents have gone! And the baby here has a half life of 14 billion years!**

See: Recommendation 5 ie page 5 of IAEA Report.

See: The Asian Rare Earth case. [CAP-SAM Paper.]

See: Lee Mun Kit's report.

13. The AELB failed to consider the written submissions by CAP-SAM (pages 10-25 BOD) regarding RWMP and SCRWD submitted by Lynas which included controversial provisions inter alia on the reuse and recycling of radioactive wastes, the arbitrary classification of radioactive wastes which differs from the IAEA classification, the glaring and shocking omission of the Decommissioning and Cessation plans and the non-identification of the PDF all of which renders the RWMP inherently flawed, makes the public review meaningless and invalidated the RWMP as an expert document.

The reuse and recycling of radioactive wastes contradict the government's earlier policies up to 2007 on radioactive wastes management on licensing ie that the supplier must obtain a letter of undertaking to take back all the wastes. See File CRW 03-06-04 in File DEIA at pg.75. Pages 68-69 BOD.

Not only is the Government abandoning its policies which has safeguard the country, it seems to making regulations ie The Atomic Energy Licensing (Radioactive Waste Management) Regulations 2011 to enable Lynas to "recycle" its wastes in the country!

See: CAP-SAM submissions in File:Comments/Submission.

See: All Recommendations of the IAEA Report.

See: File CRW 03-06-04 in DEIA File on Govt policy of radioactive waste management.

14. Non-compliance of the IAEA recommendations.

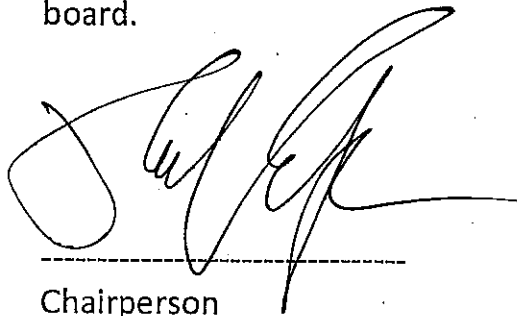
The Government has publicly stated that they would ensure compliance of the Recommendations in the IAEA Report. The numerous discrepancies noted in the comments and submissions for eg. by CAP-SAM has not been taken into consideration. **The appellants have retained Dr. Peter Karmoskos a nuclear radiologist** who is the public representative on the Radiation Health Committee (Australian Radiation Protection and Nuclear Safety Agency) **who has confirmed this.** For example he has confirmed that **the SCRWD is deficient and further that it has not addressed item 6.6 of the IAEA report ie the search for a disposal site: "This does not seem to be a priority for Lynas."**

See: Pages 70-92 BOD ie Comments on waste management related to the Lynas Advanced Materials Plant in Malaysia by Dr Peter Karamoskos.

Conclusion

It is submitted that the substantial amount of **discrepancies proved** above stated supported by experts and the fact the the **IAEA recommendations were not followed** and further that **the DEIA procedure was not adopted** nor was there a **HIA and a SIA done** and the **grossly insufficient environmental bond imposed** on Lynas and the **insufficiency of the RIA,**

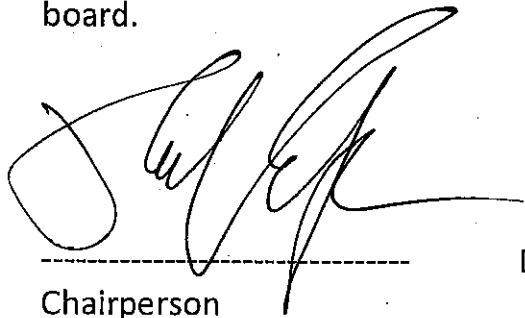
RWMP, SCRWD reports as experts documents and the stated policy of the government that the wastes must be returned to the supplier etc shows conclusively that the AELB's decision to approve the TOL even with conditions, failed to address all the issues raised and was clearly wrong and contrary to the stated position of the Government and further it is illegal. We therefore pray that the PSC recommends that the decision of the AELB made on the 30-1-2012 be set aside pending the compliance of the DEIA procedure inter alia for the HIA and SIA to be prepared, the IAEA Recommendations to be strictly followed and the location of the PDF be first located and the completion of a construction audit by a independent board.



Chairperson
Pahang Bar Committee

Dated: 10th. May, 2012.

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