FAQ RELATED TO LYNAS (M) SDN. BHD.'s PROJECT

ISSUES	QUESTION	ANSWER
GENERAL	The AELB has imposed very strict conditions to limit public access to the RWMP. The public and various stakeholders are not allowed to make copies of the RWMP on display nor is the RWMP available in soft or hardcopy for a more thorough and in-depth review by relevant independent experts in the national interests.	The documents officially belong to Lynas (M) Sdn. Bhd. and are therefore subject to their legal rights over the protection of commercial information and intellectual property.
	Lynas is a nuclear plant.	Lynas is NOT a nuclear plant. It is a chemical plant which operates at atmospheric pressure and temperature.
	Lynas is the same as Asian Rare Earth (ARE).	There are some similarities as well as differences between Lynas and ARE. The raw material at ARE was amang while the Lynas raw material is made of rare earth concentrates. They both contain uranium and thorium. However, the major difference between Lynas and ARE is that ARE raw material is 37 times more radioactive than Lynas's raw material and the ARE residue is 60 times more radioactive than what Lynas would produce.
	Lynas brings no benefits to Malaysia and Kuantan.	Lynas's FDI value is RM 2.3 billion with annual OPEX of RM600 million. Total contracts awarded to Kuantan contractors for Phase 1 amounted to RM350 million. Anticipated contract for Kuantan contractors for Phase 2 is RM149 million.
	Lynas came to Malaysia to avoid strict Australian rules.	Malaysian law is equivalent to, if not stricter than Australia's. Malaysia's lower production costs are among factors that attract foreign investment.

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PUBLIC REVIEW	Berasaskan 1,123 maklum balas daripada tatapan awam, hanya satu sahaja didapati positif. Kebanyakan maklum balas tertumpu kepada impak jangka panjang, hal-hal perundangan, cadangan memindahkan lokasi projek Lynas ke tempat lain dan bantahan projek Lynas dilaksanakan di Kuantan.	Tatapan awam bagi dokumen yang telah dikemukakan oleh Lynas kepada AELB untuk tujuan permohonan lesen kendalian sementara (TOL) telah diadakan mulai 3 Januari 2012 sehingga 26 Januari 2012. Sepanjang tempoh tersebut, AELB telah menerima 334 kunjungan dan 1,123 ulasan. Semua ulasan awam yang diterima ini telah dikaji dan dilakukan penilaian oleh Jawatankuasa Perundingan Awam (JKPA) yang mana ahlinya merupakan pakar dalam pelbagai bidang termasuk undang-undang, ekonomi, nuklear, komunikasi dan pengajian media, sosial, keselamatan dan kesihatan, perubatan dan alam sekitar. Penilaian dilakukan oleh JKPA dalam 2 peringkat bermula pada 13 Januari 2012 sehingga 29 Januari 2012. Daripada 1,123 ulasan awam yang diterima, hanya 200 ulasan mempunyai asas teknikal dan perundangan. Ulasan yang berasaskan teknikal dan perundangan ini telah diambilkira dan dikaji sedalam-dalamnya oleh pakar-pakar yang berkaitan dan dimasukkan ke dalam syarat-syarat tambahan lesen.
LEGAL	Atomic Energy Licensing (Radioactive Waste Management) Regulations 2011 or P.U.(A) 274 legitimises what Lynas is doing and AELB is a party to this.	The Regulations were drafted in 2001 based on the IAEA Working Material Radioactive Waste Management Model Regulations and their implementation (July 2000)). The draft was reviewed by a team of IAEA experts led by Mr. Chris Weedon from the United Kingdom. The Regulations had also been reviewed by the Standing and Sub-standing Safety Committees comprising groups of experts from various agencies with expertise in radioactive waste management. These Regulations were approved by the Minister of Science, Technology and Innovation on September 2011. Lynas is subjected to these regulations.
	Standards used by the AELB to exempt and clear	P.U.(A) 274 (Part IV- Reuse and recycle of radioactive

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	radioactive wastes for reuse and recycle.	wastes): As defined in the Atomic Energy Licensing (Radioactive Waste Management) Regulations, clearance level means the values established by the Board and expressed in terms of activity concentration or total activity, at or below which the source of radiation may be released from the control of the Board as specified in Second Schedule of the Regulation. Any material falling below the limit stipulated in the Regulation is considered as non-radioactive and is not controlled by the regulator. The limit for exemption of radioactive wastes is based on the activity concentration of radionuclides as referred to in the Atomic Energy Licensing (Radioactive Waste Management) 2011 and the permissible dose limit to public as stipulated by the Atomic Energy Licensing (Basic Safety Radiation Protection) Regulations, 2010. This is in-line with recommendation ICRP 60 (1991) set by the International Commission on Radiological Protection.
	Does AELB have a legal provision for public review?	There is no legal provision for public review in Act 304. However, in the case of Lynas because of public concern, the government has provided for public review.
	Lynas is taking advantage of weaknesses in Malaysian law by proposing China's standards	Malaysian law is equivalent to, if not stricter than international law. Lynas is subject to the Malaysian law and must comply with international standards and good practices.
	Lynas declares the residue as non-radioactive based on China's standard of 74 Bq/g	Under Malaysian Law, 74 Bq/g is deemed radioactive and is therefore regulated under Act 304.

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	Pre-operating license – what is this and what does it entail?	According to Act 304 and Radiation Protection (Licensing) Regulations 1986, the term 'Pre-operating license' is known as 'Class A Milling - Temporary Operation Stage License'. The licensee will be monitored closely and inspected frequently to ensure radiation safety of workers, the public and the environment. Amongst others, routine monitoring results will be evaluated before the licensee can apply for the next stage viz. a full operating license.
RADIATION SAFETY	Does the plant increase my risk of contracting cancer?	Cancer could be caused by a variety of factors including high radiation exposure. Even though there is no concrete evidence linking low levels of radiation to an increased risk of cancer, the very low levels of radiation exposure arising from Lynas's operations is still subject to strict radiation protection standards imposed by the AELB. This is to ensure the safety of workers, the public and the environment.
	If there is an accident on the highway during the transportation of rare earth, will I suffer exposure?	AELB will impose contingency plans and conduct the radiological and environmental monitoring at every stage of the plant's operation in order to ensure the health and safety of the public, workers and the environment by preventing unnecessary radiation exposure.
	What should I do in the case of a radiation accident at the plant?	Please refer to AELB for any such incident, accident or emergencies. Appropriate action will be taken based on AELB's Standard Operating Procedures (SOP) for emergency response. In the event of an incident, the public will be advised by the Government on any action to be taken to ensure public safety.
	Will I suffer impotency/ skin disease from living near	As determined in the Radiological Impact Assessment (RIA) report, the radiation exposure resulting from the Lynas

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	the plant?	factory is at a safe and acceptable level. In addition, exposure level closest to the factory is equivalent to natural background radiation. There would be no circumstances of external radiation effects (skin) to individuals as a result of radiation exposure from Lynas operations. The international maximum permissible dose limit to the skin is 500 mSv per year, averaged over an area of one square cm.
	Lynas will cause radioactive rain from the gas released by the stack.	The Radiological Impact Assessment (RIA) has determined that activities conducted by Lynas will not cause radioactive rain. Furthermore, all gases produced as a result of the plant's operations will be treated by Lynas in accordance with national regulations and international standards prior to being released through the stack. AELB will continuously monitor all emissions from the plant to verify that Lynas is complying with such regulations in order ensure public health and safety.
	Lynas did not carry out study on internal radiation exposure.	Internal radiation exposure study was included in RIA as per national and international requirements.
	No level of radioactivity is safe.	Radiation is always around us. Some areas in Perak, Selangor and Langkawi have higher than the average levels of natural radiation in Malaysia but pose no hazardous consequences. Radiation is also used in the medical field. Nevertheless, the AELB imposes the concept of ALARA (As Low As Reasonably Achievable)

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	What are the steps for radiation protection in the workplace on a regular basis and in situations such as accidents?	The principles of radiation protection are time, distance and shielding. Limit the time you are exposed to the radioactive source; increase the distance between you and the source; and shield yourself by placing objects between you and the source. These concepts form the basis of nuclear regulation allowing us to take advantage of the beneficial uses of radioactive materials while minimizing the risk to public health and the environment.
RADIOLOGICAL	Lynas labels its radioactive wastes as 'residue' not wastes	According to the IAEA glossary, wastes mean material for which no further use is foreseen. Radioactive waste is defined as waste that contains or is contaminated with radionuclides at concentrations or activities greater than clearance levels as established by the regulatory body. According to the Atomic Energy Licensing (Radioactive Waste Management) Regulations 2011 or P.U.(A) 274, radioactive waste means substance or article that contains or is contaminated with radionuclides at activity concentrations or activities greater than clearance levels and for which no use is foreseen. By-products generated which can be reused and/ or recycled (in other industries) are classified as residues. In the case of Lynas, the by-products containing naturally occurring radionuclides are known as residues. Lynas is in the process of carrying out research to reuse and recycle these residues.
	Permanent Disposal Facility (PDF) not identified	The requirement including terms and conditions for Lynas to submit the plan and location for the PDF has been spelt out in the license conditions. License conditions are generated

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		according to the Section 17 of the Act 304. Therefore it is mandatory for the licensee to comply.
	RWMP did NOT include Decommissioning and Cessation	The decommissioning plan of the plant was submitted in a separate document. In addition, one of the license's conditions is the approval that is necessary for cessation of the license. That means that the licensee must seek approval from the regulator prior to stopping operations and decommissioning the plant. The AELB has also issued the Guidelines for Decommissioning of Facilities Contaminated with Radioactive Materials (called LEM TEK 56) in 2008.
NON-RADIOLOGICAL	Environment will be polluted because the plant is located in a swampy land with shallow water table	Prior to the construction of the plant, about 2 meters of the top soil was removed and replaced with good soil. Piling was then carried out to prevent sinking. The Residue Storage Facility (RSF) was built above ground level and 4 metres above groundwater table.
	The plant uses a lot of acid that can contaminate the soil	All process areas are built on bonded concrete structure; any acid spill will be contained within the bond and will not come into contact with the ground.
	Lynas plant will pollute the river with radioactive material	All industrial wastewater will be treated to comply with international standards before being discharged. There will be zero discharge of untreated wastewater. Furthermore, Thorium is not soluble in water and will not leach out into the water system.
	The residue will be stored permanently at the site	The Residue Storage Facility at the site is only permitted for temporary storage.

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	Will the beaches and seas surrounding Kuantan be safe with Lynas in operation?	Yes, the beaches and seas surrounding Kuantan will be safe as the amount of radiation emitted is very low and will not reach those areas due to their distance.