

Lynas Corporation's Rares Earths Refinery in Malaysia – Vying for a License to Operate Amid Cries to Shut Down

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Lynas Corporation Ltd., an Australia-based mining company, is positioning itself to become “the leader in Rare Earths for a sustainable future”.¹ Lynas is only one of two producers of rare earth oxides outside of China. Lanthanide ore from its Australian operations at Mount Weld is transported to the east coast of Malaysia for processing. The project has been dogged by controversy since the start with fears of environmental threats due to radioactive and non-radioactive waste.

Lynas Malaysia Sdn Bhd, subsidiary of Lynas Corp, was awarded a Temporary Operating License (TOL) in September 2012 for its operations at the Lynas Advanced Materials Plant (LAMP) in Kuantan, Malaysia. With the deadline of the 2-year TOL approaching, the company is again under scrutiny with protesters calling for the plant to be shut down.

The Lynas Approach to Safety

According to the Lynas 2013 Annual Report, the company has made a commitment to “Zero Harm”. Where LAMP operations are concerned, the Lynas Integrated Operational Management System Standards (LIOMSS), which incorporates compliance to OHSAS 18001 (Occupational Health and Safety), ISO14001 (Environment) and ISO9001 (Quality), is implemented. The company states that an independent third party² monitors environmental data to ensure radiation, water and air quality standards. Data is then shared via the Malaysian Department of Environment and Malaysian Atomic Energy Licensing Board websites.³

Lynas is also taking measures to minimise storage of solid residues from LAMP operations by converting them to synthetic mineral products. Commercialisation of those products is being studied and initial testing “has demonstrated that they are non-toxic, will not leach into the ground and are non-radioactive”⁴.

Regulatory Setting & Malaysia's Environmental Record

The Temporary Operating License was awarded by the Malaysian Atomic Energy Licensing Board (AELB) which is charged with enforcing the Atomic Energy Licensing Act (AELA - 1984). Operations are also overseen by the Malaysian Department of Environment (DoE). The Department confirmed that a Detailed Environmental Impact Assessment (DEIA) was not required according to its guidelines.⁵ A spokesperson for the DoE stated at the time that the only difference between a DEIA and a PEIA is that the former does include an “element of public engagement”. In August 2013, Lynas issued a media release stating that the LAMP was fully compliant with environmental regulations.⁶

Public mistrust of the project can be linked to the environmental disaster surrounding the Mitsubishi rare earths plant in Bukit Merah, Malaysia in the 1980s-1990s. The refinery was identified as the cause of birth defects and eight leukemia cases within five years in a community numbering 11,000 inhabitants. The case was settled quietly with Mitsubishi Chemical agreeing to shut down the plant and clean up the site at a cost of USD\$100 million.⁷ Although residents began protesting and raising their concerns as early as 1982, the plant only closed in 1992.⁸

Protests Against LAMP

The Bukit Merah case established a legacy of public mistrust towards AELB and other Malaysian Government departments⁹ which can be seen to extend to the current Lynas project. Local Kuantan group Save Malaysia Stop Lynas (SMSL) and the grassroots movement Himpunan Hijau (Green Assembly) have been particularly notable in mobilising Malaysians against Lynas operations in Malaysia.

At December 2013, Himpunan Hijau had reportedly collected 1.2 million signatures in a petition calling for the plant to be shut down.¹⁰ More recently, SMSL issued a press statement on 28 June 2014 with a call not to renew LAMP's license for non-compliance to terms of the TOL. SMSL claim that Lynas has not disclosed to the public the location of the Permanent Deposit Facility or how solid wastes will be treated. SMSL is also concerned about the company's financial ability to "honour its pledge to the government to remove the waste", in particular in the case of foreclosure.¹¹ (The company is currently facing liquidity issues and has reportedly requested an extension from 5 years to 7 years to deliver a USD\$50 million security deposit).¹²

Also in June 2014, Himpunan Hijau resumed protests outside the plant.¹³ An estimated 1,000 people joined in the protests which led to at least 16 arrests.¹⁴ The arrest of Natalie Lowrey, an environmental activist based in Sydney, Australia brought international attention to the protests. She was subsequently released on bail after 6 days in remand. Malaysian protesters were also released, with conditions which their lawyer claims infringe on their human rights to freedom of expression.¹⁵

Non-Compliance to Terms of the TOL?

In 2011 prior to the issuance of the Temporary Operating License, the International Atomic Energy Agency (IAEA) conducted a mission to review the radiation safety aspects of the proposed project. The IAEA did not find any incidences of non-compliance with international radiation safety standards.¹⁶ However, it submitted eleven recommendations to be met before a TOL should be issued. These include submission by Lynas of a waste management plan to address:

- How waste will be stored or disposed of;
- What will happen when the project ends and the plant is dismantled;
- How the environment will be restored to normal use at the end of the project life.¹⁷

The IAEA Report also had a number of recommendations for both AELB and Lynas to improve activities regarding public information and public involvement.

According to a document issued by AELB, Lynas Malaysia Sdn Bhd has produced a Radiation Waste Management Plan.¹⁸ A Decommissioning Plan was also submitted separately. However, these documents have not been made public citing the legal rights of Lynas over the protection of commercial information and intellectual property. The company's plan for a permanent disposal facility has reportedly been approved by AELB.¹⁹

The Malaysian Atomic Energy Licensing Board claims that Malaysian law "is equivalent to, if not stricter than international law".²⁰ However, in a June 2014 report Greenpeace Southeast Asia stated: "Malaysia has less stringent environmental regulations in place than many other countries, including Australia, where the company is registered and where it holds a permit under much stricter regulations".²¹ The IAEA report also required assurances that AELB have "sufficient human, financial and technical resources, competence and independence".²² It is unclear what steps AELB may have taken in response.

There have been three court cases challenging the TOL. The first was dismissed by the Kuala Lumpur High Court, the Malaysian Court of Appeal and the Malaysian Federal Court. In a second case, residents withdrew their appeal. A third case is pending.²³

Other Critiques

A 2013 report of Malaysian Physicians for Peace and Social Responsibility is highly critical of regulation of the Lynas operations stating:

"There has been widespread public opposition to the Lynas plant as Malaysians are painfully aware of the serious health and environmental hazards of processing rare earth elements, when there is no stringent regulation and control, reinforced by Malaysia's unreliable maintenance and safety culture, as a result of irregular enforcement of the law, lax attitudes to safety regulations and procedures in occupational

health, and inadequately trained and motivated personnel”.²⁴

Also in 2013, the Oeko-Institute based in Germany issued a report on behalf of the SMSL to evaluate LAMP emissions, safety issues and waste management.²⁵ In “Description and critical environmental evaluation of the REE refining plant LAMP near Kuantan/Malaysia” the Institute concluded *inter alia* that:

- The design of the Residue Storage Facilities (RSF) is not state-of-the-art with respect to leakage prevention;
- The RSF for the waste from the Water Leach Purification (WLP) process stage with the highest radionuclide and toxic content is... not designed to store the wastes produced before a safe external permanent disposal facility has been established and is inadequately designed to safeguard against heavy rain and the monsoon season;
- A safe and publicly acceptable way to establish a permanent disposal facility (PDF) for the WLP waste must be seen as a prerequisite for the management of these wastes.

In response to the Oeko-Institute report, Friends of the Earth (FoE) in March 2013 called for Lynas to “develop a thorough cradle-to-grave waste management plan regardless of its unacceptable proposed commercial uses. That plan should be developed, assessed, approved and be in place, before any other operations are allowed. It must be safe and publicly acceptable by affected local communities”.²⁶

Greenpeace similarly calls for Lynas to complete “a thorough overhaul of its facility’s construction defects to upgrade the plant to best environmental practices and present(s) a safe and acceptable plan for dealing with the radioactive waste stream from this plant outside of Malaysia”.

Greenpeace and FoE are both urging shareholders to divest from the company.²⁷

Other Issues/Developments

A number of incidents since the beginning of production add to public concerns. In its 2013 Annual Report, Lynas Corp disclosed issues related to clogging and premature wearing of equipment in the cracking and leaching units. The Company assures that the issues are being addressed through a series of work programs.²⁸

In December 2013, the area around the LAMP facilities was hit by major floods. Fears were raised that the Residue Storage Facility (RSF) would leak into the environment.

Three deaths have also been reported at LAMP since 2012.²⁹ They were dismissed by the company as non-related to LAMP operations, citing deaths caused by “failing health and following a road accident”.³⁰

In March 2014, a chemical spill occurred when transporting chemicals from the Lynas Rare Earths refinery to Port Klang on the west coast.³¹ Thirteen of fifteen containers fell from a trailer. Four containers leaked NdPr chloride solution onto the road resulting in its closure until a clean-up was completed.

Falling rare earths prices on the market have placed Lynas Corporation in a difficult cash position. To avoid triggering a supply crisis, the company adopted a minimum price schedule and reported signs of recovery in some price categories in its 2013 Annual Report.³² Share prices fell in March 2014 on the news that half year losses had widened to \$59.3 million.³³

Eric Noyrez quit after 14 months as Lynas CEO to be replaced by Amanda Lacaze in June 2014. The market reacted to the news with a fall in share prices.³⁴ Amanda Lacaze announced in July 2014 that Lynas would be relocating its headquarters to Malaysia in a move to reduce costs.³⁵

Summary

Civil society continues to protest and criticise so long as information is not being made available. Based on the sources cited above, it is reasonable to conclude that Lynas Corporation has not sufficiently addressed its obligations to show faith with public opinion.

Lack of faith of public opinion has not been sufficiently addressed by Lynas Corporation.

In 2011, the IAEA recommended that “Lynas, as the party responsible for the safety of the proposed rare earths processing facility, should be urged to intensify its communication with interested and affected parties in order to demonstrate how it will ensure the radiological safety of the public and the environment”.³⁶

As Lynas works towards fulfilling requirements to obtain a full Operating License, there is room for efforts

to earn a 'social license' from the community. With a new CEO in place and the opening of headquarters in Malaysia, the timing could be right for a new approach to stakeholder management.

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Important Developments Since Issuance of the TOL in 2012

DATE	DEVELOPMENT
5 September 2012	AELB issues TOL for LAMP
February 2013	Lynas produces its first products for customers
30 June 2013 (year end)	144 tonnes produced and 117 tonnes shipped; Construction Phase 2 virtually complete
June 2013	Defamation suit against SMSL dropped
December 2013	Major floods in Kuantan; Death of an engineer who drowned in a pond facility
March 2014	Chemical spill near Temerloh
June 2014	Eric Noyrez quits as Lynas CEO and is replaced by Amanda Lacaze; Renewed protests by Himpunan Hijau calling for closure of LAMP
July 2014	Amanda Lacaze announces that Lynas headquarters will be moved to Malaysia
2 September 2014	Deadline for the TOL

ENDNOTES

- Lynas Annual Report 2013. *The Path From Here*. Pg. 1
- It is unclear who this third party is.
- Environmental data can be found at: <http://www.doe.gov.my/portalv1/lain-lain/lynas-data-pengawasan-alam-sekitar/312317> and http://www.aelb.gov.my/aelb/malay/teks/lynas_faq.asp. Information is primarily available in Malay only.
- Lynas Annual Report 2013. *The Path From Here*. Pg. 18

- A Preliminary Environmental Impact Assessment (PEIA) was required and carried out in 2008.
- Lynas Corporation Media Release, 1 August 2013. Accessible on-line at: http://www.lynascorp.com/Announcements/2013/Media%20Release_Environmental%20monitoring%2001082013%201242685.pdf
- New York Times. 8 March 2011. *Mitsubishi Quietly Cleans Up Its Former Refinery*. Accessible at: http://www.nytimes.com/2011/03/09/business/energy-environment/09rareside.html?_r=0 NB: Mitsubishi

also reached an out-of-court settlement with the community, donating \$164,000 to local schools. The company continued to deny any responsibility for illnesses.

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