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Lynas should stop misleading information about its radioactive wastes

Sahabat Alam Malaysia (SAM) and the Consumers Association of Penang (CAP) state that Lynas should stop misleading the public about its wastes.

We say this in response to Lynas Malaysia Sdn. Bhd. that our statement carried in the media today "is factually inaccurate" when we said that the wastes from the water leached purification (WLP) process should be removed from Malaysia, as these wastes cannot be regarded as naturally-occurring radioactive material (NORM), but are in fact technologically-enhanced, and have been made dangerous by technological processes.

It is indeed misleading of Lynas to claim as "a scientific fact" that the WLP residue is "naturally occurring." Lynas claims that "there is NO technological enhancement of the low level, naturally occurring radionuclides (Thorium and Uranium)."

Clearly, it is the Lynas claim that is unscientific, defies common sense and logic.

The fact of the matter is that the feedstock that is processed by the Lynas plant has been brought from Australia and removed from its natural state. Once naturally occurring radioactive elements material are removed from the ground and are technologically processed, they cannot be referred to as "naturally occurring" anymore, as they are not in their natural state.

Any removal and processing of the "naturally occurring" radioactive material becomes technologically-enhanced NORM or TENORM. To call them NORM is scientifically misleading.

Indeed, the U.S Environmental Protection Agency, defines TENORM as, "Naturally occurring radioactive materials that have been concentrated or exposed to the accessible environment as **a result of human activities such as manufacturing, mineral extraction, or water processing**." (Emphasis added).

The U.S. EPA also states that "Technologically enhanced" means that the radiological, physical, and chemical properties of the radioactive material have been concentrated or further altered by having been processed, or beneficiated, or **disturbed in a way that increases the potential for human and/or environmental exposures**." (Emphasis added).

Further, it defines NORM as "Materials which may contain any of the primordial (existing from the beginning of time, naturally occurring) radionuclides or radioactive elements as they occur in nature, such as radium, uranium, thorium, potassium, and their radioactive decay products, such as radium and radon, **that are undisturbed as a result of human activities**." (Emphasis added).

The Lynas wastes are definitely TENORM as naturally-occurring radioactive elements have been disturbed and made more dangerous by technological processes which involve the removal from the ground of the thorium and uranium and concentrated by mechanical and chemical processes.

We reiterate that claims that the radioactive elements such as uranium and thorium in the WLP can be diluted and made less radioactive do not hold water and are unfounded.

It is not well known that uranium and thorium and their daughters have very long half-lives of millions and billions of years.

No one can possibly claim that the radioactive material can be stored safely for millions and billions of years.

Moreover, there is no such thing as a safe level of radiation, as any dose has an effect, as stated by the reports of the U.S. National Academy of Sciences Biological Effects of Ionising Radiation (BIER), with the latest being the seventh report.

Just because governments set what are known as 'permissible levels' of exposure, this does not mean that these levels are safe, as there are economic and other considerations which are taken into account in setting 'permissible levels', even when there are risks to public health and the environment.

The issue is whether the public and the people in the surroundings are willing to accept the risks to their health and environment for generations to come.

SAM and CAP cannot be simply dismissed as being unqualified.

We have learnt from our work and experience with the Asian Rare Earth (ARE) plant in Bukit Merah, Ipoh, which has taught us a lot of valuable lessons which we must learn from.

Although the raw material used and the final rare earth product in the Lynas Plant is different from what is used and produced in the ARE plant, the wastes generated by both plants are similar, in that they contain uranium and thorium and there are huge challenges in managing and disposing of them.

The ARE wastes which are being kept in the Kledang Range in Perak are now the responsibility of the Atomic Energy Licensing Board and the Perak State government, and this poses a huge and immense challenge in ensuring that the permanent disposal facility is managed in a safe manner for hundreds, millions and billions of years to come.

In relation to the Lynas waste, the best option in safeguarding public health and the environment is to send the wastes back to Australia, so that the Malaysian government does not have the responsibility of managing this waste, which will remain radioactive for an incredibly long time.

That is the truth of the matter. We must not be fooled or lulled into thinking that the radioactive waste is not a problem and that it can be diluted. We are talking of safety for millions and billions of years to come, and no one can guarantee that.

Lynas must not be allowed to wriggle from its undertaking to the government, that if it cannot meet the condition of removing the radioactive wastes back to Australia, it should not be allowed to operate any further.

Why should the Malaysian government and its people pay the price for generations to come, for the profits of one company?

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