

New lab boosts DENR capacity to assess, control lethal pollutants

By Jonathan L. Mayuga

Business Mirror, January 9, 2017

WITH a dioxins/furans laboratory in place, the Department of Environment and Natural Resources-Environmental Management Bureau (DENR-EMB) now boasts of an enhanced capacity to assess and control persistent organic pollutants (POPs).

As a party to the Stockholm Convention on Persistent Organic Pollutants, the Philippines needs to develop its local capability to assess and control POPs, including polychlorinated dibenzo-p-dioxin and polychlorinated dibenzofurans or dioxins.

“We now have a dioxins/furans laboratory to do that. We are currently in the process of capacity-building and training our EMB personnel,” DENR Undersecretary for Special and Foreign Assistant Projects Jonas Leones said.

The establishment of the dioxins/furans laboratory started in 2015. It has a total estimated cost of P95 million.

A brainchild of Leones during his stint as director of the DENR-EMB, the laboratory is the last of a number of laboratories needed to make the Philippines capable of assessing all POPs and meet its obligation under the Stockholm Convention.

Dioxins are among the most toxic chemicals known to science and are detectable in almost all compartments of the global ecosystem in trace amounts, according to Fatima Molina, supervising science research specialist and chief of the DENR-EMB’s Laboratory Services.

The DENR-EMB recently acquired a High-Resolution Gas Chromatograph Mass Spectrometer to do the job of assessing the presence of dioxins/furans.

“We are in the process of calibrating our laboratory equipment and hopefully, by the first quarter, it will be ready for use,” Molina said.

A deadly POP, dioxins do not serve any useful purpose. These are formed as byproducts of numerous industrial activities and all combustion processes, such as exhaust gases, solid and liquid residues and effluents.

Burning of household trash and forest fires can also result in release of dioxins and furans into the environment.

According to experts, dioxins are persistent in the environment. They accumulate in animal fat and can travel long distances.

Member-countries of the Stockholm Convention, such as the Philippines, are giving priority to dioxin/furan management through the conduct of activities that cover national inventories, source reduction and control strategies.

According to Leones, the establishment of a dioxin/furans laboratory also boosts the plan of the DENR to push for waste-to-energy projects in partnership with other countries.

With a dioxin/furans laboratory in place, the DENR-EMB can now generate data to support policy and decisions on the adoption of appropriate approach in the management of POPs from national inventories, source reduction and control strategies, and in order to support the enforcement of the provisions on dioxins in the Clean Air Act, or Republic Act (RA) 8749, and the Solid Waste Management Act or RA 9003.

The Philippines is currently implementing the Integrated Persistent Organic Pollutant (IPOP) project to assist the country in meeting its obligation under the Stockholm Convention.

The project also aims to boost the country's capacity for the sound management of chemicals. With its enhanced capability to assess dioxins and furans, the DENR-EMB can also now provide evidence that will support its decision-making process.

It can also now provide data that would be used in the formulation of criteria for dioxins and furans in water, soil, fish, sediments and biota.

The DENR-EMB can also now collaborate with the Food and Drug Administration, Department of Health and Department of Agriculture and other government and private agencies regarding the regulation of dioxins/furans level and exposure in food, animal and animal products, plants and plant by-products.

More importantly, with such laboratory, the Philippines no longer need to request and spend huge amount of money for a laboratory test from other countries, which normally costs around \$2,000, according to Molina.

A local laboratory equipped with such capabilities, she added, enables the DENR to respond in emergency situations. Aside from conducting training on how to use the equipment, the DENR-EMB needs more laboratory personnel in its regional and central offices with training on sampling and analysis to monitor dioxins.