

Study on the Implementation of the Chemical Safety Program among Accredited Treatment, Storage and Disposal (TSD) Facilities

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ABSTRACT

Background

Workers in the treatment, storage and disposal (TSD) facilities are exposed to hazardous wastes produced from the use of industrial chemicals. These hazardous wastes require special management and are controlled by law in the Philippines through the Toxic Chemicals and Hazardous Wastes Act or Republic Act 6969. There are about 136 accredited TSD facilities in the Philippines.

According to the Compendium of Philippine Environment Statistics 2016, there were a total of 202.5 million tons of hazardous wastes generated from 2006 to 2015. About 98.4 percent of which was generated by Region III (Central Luzon), 1.3 percent by Region IV-A (CALABARZON) and the remaining 0.3 percent by other regions (excluding ARMM). Among these, around 12.3 and 12.1 million tons of inorganic chemical wastes such as Mercury and Lead and wastes with Cyanide are produced respectively.

Given the enormous amount of hazardous wastes produced in the Philippines and considering the toxicity of the chemicals being processed by TSDs, workers in this sector may be at risk of exposure to these hazardous materials.

The issuance of the Department Order 136-14, also known as the “Guidelines for the Implementation of Globally Harmonized System (GHS) in the Chemical Safety Program in the Workplace” has been implemented since February 2014. This department order applies to workplaces engaged in the manufacture, use and storage of chemicals including those working in the accredited TSD facilities. This aims to protect workers and properties from the hazards of chemicals and to prevent or reduce the incidence of chemically induced accidents, illnesses, injuries and death resulting in the use and handling of chemicals at work. The workers in these TSD facilities are exposed to toxic hazardous chemicals that, upon exposure, may endanger and put the workers’ lives at risk. Thus, this study has explored compliance with the implementation of the Chemical Safety Program in the treatment, storage and disposal facilities.

Objective

This study intends to determine the compliance of the different accredited TSD facilities with regards to the implementation of the various requirements of the Chemical Safety Program in the workplace which is vital for the protection of the workers in this field.

Methodology

List of accredited TSD facilities were obtained from the Hazardous Waste Management Section of the Department of Environment and Natural Resources – Environment Management Bureau. TSDs were selected based on their categorization and specifications as per the Technical Guidelines for Specific Categories of Treatment, Storage and Disposal (TSD) Facilities. Both recycling (category D) and chemical treatment facilities (category E) were considered. Additionally, selection of TSD facility respondents were also influenced on the chemicals being treated, stored and disposed. Chemicals were limited to Lead (Pb), Mercury (Hg) and Cyanide (CN), all of which are regulated and monitored with Chemical Control Order. The total sampling size was thirty eight (38). Among these, only sixteen (16) companies agreed to be respondents in the study.

A devised checklist (containing elements of the Chemical Safety Program as prescribed in the Department Order 136-14) were utilized for data collection aside from interview and ocular in the study site (see Appendix A). Data collected were analyzed with the use of descriptive statistics. Both compliance with the implementation of Chemical Safety Program and assessment of the ventilation controls were included in the checklist.

RESULTS

Based on the data collected from the survey, only about 38% of the respondents were fully compliant with the implementation of CSP in the workplace. However, the majority of the surveyed respondents can only be considered as partially compliant (56%) and fully non-compliant with the CSP implementation was observed for the 6% of the respondents. The results showed that there is a lack of full implementation of the Department Order 136-14.

The average overall compliance for the chemical safety program is recorded at 2.138. Top three compliance ratings were recorded in Waste Management (M=2.375), Storage Requirements and Inventory (M=2.250) and both Personal Protective Equipment and Occupational Health and Medical Surveillance (M=2.188). Subsequently, the lowest compliance was recorded in Work Environment Measurement (M=1.938).

Ventilation control measures were also provided in each TSD facility surveyed, however, data on its efficiency were not obtained.

RECOMMENDATIONS

Upon the conduct of this study, further evaluation on the chemical exposure and ventilation control measures is recommended to ensure that workers are kept safe and

healthy against chemical and other environmental hazards present in such hazardous workplace. In addition to this a stricter monitoring on the implementation of the Chemical Safety Program is recommended.