

(Garuda Emblem)

**Notification of Ministry of Industry****Re: Emission standard for factory using processed used-oil and synthetic fuel  
as fuel in industrial furnaces****B.E. 2548 (2005)**  
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In order for the supervision of the operation of factories using processed used-oil or synthetic fuel under the Ministerial Notification regarding Specification of processed used oil and synthetic fuel as alternative fuel for furnace oil in an industrial furnace to be efficient and not causing impact to the environment and public safety,

By virtue of the provisions in Article 16 of the Ministerial Regulation No. 2 (B.E. 2535 (1992)) issued pursuant to the Factory Act B.E. 2535 (1992), which contains some provisions concerning the limitation of the people rights and liberties that is permissible by the provisions of section 29 together with section 35, section 48 and section 50 of the Constitution of the Kingdom of Thailand, the Minister of Industry hereby issues the Ministerial Notification as follows:

Article 1      In this Notification,

“Processed used-oil” shall mean used oil that have been through physical or chemical processes for quality improvement to be used as fuel without mixing with any other materials such as solvent, pesticides, paint residues, etc.

“Synthetic fuel” shall mean used oil that has been mixed with other materials through the process of waste blending for quality improvement to be used as fuel.

“Industrial furnace” shall mean an industrial furnace that is used in the production process of factories, according to type 59: iron an steel basic industries, type 60: non-ferrous metal basic industries, type 88: factory manufacturing, supplying or distributing electric energy, and heating devices used in the production of the factory according to type58(1): factory engaged in business related to the manufacture of concrete products, mixed concrete products, gypsum products or plaster products of the list annexed to the Ministerial Regulation (B.E. 2535 (1992)) issued pursuant to the Factory Act B.E. 2535 (1992), including boilers in general production processes.

Article 2      Air emitted from the factory that uses processed used-oil and synthetic fuel as fuel in industrial furnaces shall have concentration of contaminants not exceeding the following prescribed values.

No.	Contaminants	Quantity of air contaminant
1	Particulate Matter	240 milligrams per cubic meter
2	Hydrogen Chloride and Hydrogen Fluoride	Aggregate not exceeding 85 part per million
3	Carbon Monoxide	110 part per million
4	Sulfur Dioxide	800 part per million
5	Oxide of Nitrogen as NO <sub>2</sub>	200 part per million
6	Dioxins/Furans as TEQ	0.50 nanogram per cubic meter

7	Mercury	0.15 milligram per cubic meter
8	Heavy Metals: Antimony, Arsenic, Cadmium, Selenium, and Tellurium	Aggregate not exceeding 0.65 milligram per cubic meter
9	Heavy Metals: Vanadium, Chromium, Cobalt, Nickel, Copper, Lead, Manganese and Tin	Aggregate not exceeding 13.0 milligrams per cubic meter

Article 3 Air emitted from factory type 59, iron and steel basic industries, that have a total production capacity from 100 tons per day upward and factory type 88, factory producing, supplying or distributing electric energy, in case of using processed used-oil and synthetic fuel as fuel in industrial furnaces, in addition to having to have a content value of each kind of contaminant not exceeding that prescribed under Article 2, must have a content value of particulate matter, sulfur dioxide and oxide of nitrogen not exceeding that prescribed in the Notification of Ministry of Science, Technology and Environment regarding prescription of the standard controlling the release of waste air from iron and steel factories, dated 9<sup>th</sup> March B.E.2544 (2001) and the Notification of Ministry of Industry regarding prescription of the content value of contaminants in air emitted from factories producing, supplying or distributing electric energy B.E. 2547 (2004) dated 28<sup>th</sup> September B.E. 2547 (2004).

Article 4 Measurement of contaminant concentration in air emitted from industrial stack of a factory using processed used-oil and synthetic fuel as fuel in industrial furnace, shall be as follows:

(1) The particulate matter content, use the Determination of Particulate Emissions from Stationary Sources prescribed by the United States Environmental Protection Agency (USEPA) or other methods approved by the Department of Industrial Works.

(2) The hydrogen chloride content, use the Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources Non-Isokinetic or the Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources Isokinetic prescribed by the United States Environmental Protection Agency (USEPA) or other methods approved by the Department of Industrial Works.

(3) The carbon monoxide content, use the Determination of Carbon Monoxide Emissions from Stationary Sources prescribed by the United States Environmental Protection Agency (USEPA) or other methods approved by the Department of Industrial Works.

(4) The sulfur dioxide content, use the Determination of Sulfur Dioxide Emissions from Stationary Sources or the Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources prescribed by the United States Environmental Protection Agency (USEPA) or other methods approved by the Department of Industrial Works.

(5) The content of oxide of nitrogen as NO<sub>2</sub>, use the Determination of Nitrogen Oxide Emissions from Stationary Sources prescribed by the United States Environmental Protection Agency (USEPA) or other methods approved by the Department of Industrial Works.

(6) The content of dioxin/furans, use the Determination of Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans Emissions from Stationary Sources prescribed by the United States Environmental Protection Agency (USEPA) or other methods approved by the Department of Industrial Works.

(7) The content of heavy metals, use the Determination of Metals Emissions from Stationary Sources prescribed by the United States Environmental Protection Agency (USEPA) or other methods approved by the Department of Industrial Works.

Article 5 The result of the measurement of contaminant concentration in air emitted from factory stack, shall be reported at pressure of 1 atmosphere or at 760 millimeters of mercury, temperature of 25 degrees Celsius, on a dry basis, of 50% excess air and 7% oxygen in waste air.

This shall, thus, enter into force on the day following the date of its publication in the Government Gazette.

Announced on the 20<sup>th</sup> day of May B.E. 2548 (2005)

(signed)\_\_\_\_\_

(Mr. Watana Muangsook)  
Minister of Industry

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