

# Effective from 26<sup>th</sup> October 2016

## Ministerial Regulation

### Soil and Groundwater Contamination Control in Factory Area

**B.E. 2559 (2016)**

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By the virtue of the first paragraph of Section 6 and Section 8 94) (5) (6) (7) and (8) of the Factory Act B.E. 2535, the Minister of Industry herewith prescribes the following Ministerial Regulation:

**Section 1** This Ministerial Regulation shall come into force after the period of 180 days as from the date of its publication in the Government Gazette has elapsed.

**Section 2** In this Ministerial Regulation;

**“Soil and groundwater contamination”** means a state when soil and groundwater in factory area are contaminated in a level that is not habitable or that it became risky and is probably harmful to health and environment.

**“Soil and groundwater quality inspection”** means a sampling and analysis of soil and groundwater in factory area, and a comparison of the sampling’s contaminant concentration with the soil and groundwater contamination criteria.

**“Soil and groundwater contamination criteria”** means a background level of soil and groundwater contaminant in factory area calculated in accordance with a criteria and method determined by the Minister that is published in the Government Gazette, which is safe for health and environment.

**“Contaminant”** means chemicals or any other things used or stored in factory area, or wastes generated in the factory that may be harmful to health and environment, as follows;

- (1) Volatile Organic Chemicals (VOCs)
- (2) Heavy Metals
- (3) Herbicides and Pesticides
- (4) Substances of which their properties and qualifications are in accordance with the Notification of Ministry of Industry regarding the Industrial Waste Management.
- (5) Other substances as determined by the Minister and published in the Government Gazette

**“Factory operator”** means a person engaging in a factory business according to types or kinds of factory annexed to this Ministerial Regulation.

**Section 3** For people's safety and environmental quality protection and conservation, a factory operator shall carry out a soil and groundwater inspection and assure that their contamination levels are not exceeding the soil and groundwater contamination criteria.

**Section 4** A factory operator shall carry out the soil and groundwater inspection and shall keep the inspection report for an examination by the Department of Industrial Works prior to a commencement date of the factory.

The factory operator shall carry out the second soil and groundwater inspection after a period of 180 days from the factory's commencement date has elapsed and shall submit the second inspection report to the Department of Industrial Works or its respective Provincial Industrial Office within 120 days of the second inspection's due date. In this regard, the inspection report specified in the first paragraph shall also be enclosed.

**Section 5** A factory operator who has engaged the factory business before the enforcement of this Ministerial Regulation shall carry out the first soil and groundwater inspection within 180 days following the enforcement date of this Ministerial Regulation and submit the inspection report to the Department of Industrial Works or its respective Provincial Industrial Office within 180 days of the first inspection's due date.

The factory operator according to the first paragraph shall carry out the second soil and groundwater inspection within a period of 180 days following the inspection specified in the first paragraph has elapsed and shall submit the second inspection report to the Department of Industrial Works or its respective Provincial Industrial Office within 120 days of the second inspection's due date.

**Section 6** After the inspection period specified in the second paragraph of Section 4 and the second paragraph of Section 5, as the case maybe, are due, the factory operator shall constantly carry out the soil inspection every three years and the ground water every year and shall submit the inspection report to the Department of Industrial Works or the respective Provincial Industrial Office within 120 days of the inspection due date of each case.

In case where there are reasonable grounds to protect people's safety or to conserve environmental quality or where soil and groundwater contamination in any factory area are exceeding the soil and ground water criteria, the competent official may order such factory operator to carry out the additional soil and groundwater inspection prior to the due date specified in the first paragraph.

**Section 7** Soil and groundwater inspection shall be undertaken by a private laboratory that is registered with the Department of Industrial Works or any other laboratory approved by the Department of Industrial Works.

**Section 8** Soil and groundwater inspection and determination of soil and groundwater criteria shall be in accordance with the criteria and method determined by the Minister and published in the Government Gazette.

**Section 9** For the benefit of the determination of soil and groundwater contamination criteria and the control of contamination, the Minister may require, by published in the Government Gazette, a factory operator to notify detail information of chemicals used or stored in the factory area, flow diagrams identifying sampling points and monitoring wells for the soil and groundwater inspection and analysis in the factory area and any other information necessary for the execution of this Ministerial Regulation.

**Section 10** In case where the inspection report identifies that the contamination level is exceeding the criteria, such factory operator shall prepare a report indicating the measures to control and mitigate soil and groundwater contamination to be complied with the soil and groundwater contamination criteria and shall submit such report to the Department of Industrial Works or the respective Provincial Industrial Office within 180 days following the date when the contamination is inspected exceeding the criteria. The contamination mitigation plan and schedule shall also be indicated in such report.

**Section 11** The inspection report and the contamination control and mitigation report shall be prepared in accordance with the form determined by the Minister and published in the Government Gazette.

**Section 12** In case where it deems appropriate, the competent official may order the factory operator who fails to submit the soil and groundwater contamination control and mitigation report or fails to indicate the implementing plan and schedule according to Section 10 to carry out the mitigation measures to control the contamination to be in line with the soil and groundwater criteria within the specific period.

In case where the implementing plan and schedule according to Section 10 is already indicated by the factory operator but the competent official considers that such period is too long, the competent official may order such factory operator to complete the implementation of the mitigation measures earlier than the proposed schedule.

Given on 21<sup>st</sup> March B.E. 2559 (2016)

Atchaka Sibunruang

Minister of Industry

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**Annex of the Ministerial Regulation regarding Soil and Groundwater  
Contamination Control in Factory Area B.E. 2559 (2016)**

<b>No.</b>	<b>Type</b>	<b>Type or Kind of Factory</b>	<b>Group</b>
1	22	Factory engages in business related to textile, yarn or fiber that is not asbestos, as follows; (1) Fiber fermenting, carbonizing, carding, combing, drawing, spinning, twisting, reeling, texturizing, bleaching, or dyeing (2) Weaving or preparation warp for weaving (3) Textile or yarn bleaching, dyeing or finishing (4) Textile printing	3
2	38	Manufacturing of pulp or paper as follows; (1) Producing pulp from wood or other materials (2) Producing paper, paperboard, or paper made from fibre for construction work, or fibreboard	3
3	42	Factory engages in business related to chemical products, chemicals, or chemical materials, which is not fertilizer, as follows; (1) Producing chemical products, chemicals or chemical materials (2) Storage, transportation, sorting, selecting or packaging toxic chemical products	3
4	45	Factory engages in business related to paints, shellac, lacquer, or sealers as follows; (1) Producing paints, sprayed paints, coating paints (2) Producing lacquer, paint mixing oil or paint remover (3) Producing shellac, lacquer, or sealer	3
5	48	Factory engages in business related to chemical products as follows; (1) Producing polishes for furniture or metal, wax or materials for building decoration (2) Producing disinfectants or anti odor (3) Producing waterproof agent, wetting agent, emulsifiers, penetrants, gluing agent, sizing agent or cements from plant, animal or plastic, which excludes dental cements (4) Producing matches, explosives or fireworks (6) Producing ink or carbon black (12) Producing metal, oil or water treating compounds, prepared photo-chemical materials or sensitized film, paper or cloth	3
6	49	Petroleum refinery plant	3
7	60	Factory engages in business related to smelting, mixing, refining, smelting, casting, rolling, drawing, or manufacturing of non-ferrous metal basic industries	3

No.	Type	Type or Kind of Factory	Group
8	74	Factory engages in business related to electrical equipment as follows; (1) Producing electrical tubes or lamps (4) Producing insulator or insulating material, which is not ceramic or glass (5) Producing dry or liquid batteries and their parts	3
9	100	Factory engages in business related to finishing or changing products' appearances or parts (no manufacturing) as follows; (1) Color painting, spraying or coating (2) Painting, spraying or coating with shellac, lacquer or other glazes (5) Plating, anodizing	3
10	101	Central Waste Treatment Plant	3
11	105	Factory engages in business related to sorting or landfill waste or unusable materials that have characteristics and properties as specified in Ministerial Regulation No. 2 (B.E. 2535) issued under the Factory Act B.E. 2535	3
12	106	Factory engages in business related to recycling of unusable industrial products or industrial wastes to be raw materials or new products through industrial production processes.	3