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Readers are consequently advised to consult qualified professional counsel before making any decision in connection with the enactment, which is here presented in translation for their general information only.

Water Regulations (Prevention of Pollution of Water) (Metals and Other Pollutants), 5761-2000

By virtue of the powers vested in me under Section 20D (a) (1) and (2) of the Water Law, 5719-1959 (hereinafter - the Law), and under Section 10A of the Licensing of Businesses Law, 5728-1968 (hereinafter - the Licensing of Businesses Law), and after consultation with the Minister of Health and the Water Council, and with the approval of the Economics Committee of the Knesset, I make the following Regulations:

Purpose of the regulations

1. The purpose of these regulations is to protect water resources from metals and other pollutants, and this by limiting the quantities of sewage discharged from pollution sources and reducing the concentration of pollutants therein.

Definitions

1 In these Regulations -

"Sludge" - any of the following -
(1) A substance that is separated from sewage by means of sedimentation, flooding or filtration;
(2) Sediment that accumulates on a production line, including on the bottom of the production tanks;

"Surface treatment" - treatment of the surface area of a product, in a manner that creates or that is liable to create sewage containing a pollutant, including treatment for the removal of grease, coatings and oxides;

"Spill containment pallet " - a receptacle within which a tank is placed in order to prevent leaks from it;

"Pollutant" - any of the substances enumerated in the Schedule;

"Pre-treatment facility" - a facility, including its various components, in which the sewage of a plant is treated before its removal from it, including a facility for the treatment of

sludge;

"Supervisor" - whoever the Minister of Environmental Protection has appointed for the purposes of these Regulations;

"Plant" - a place in which surface treatment is implemented by rinsing and from which pollutants are emitted or are liable to be emitted, and including places in which the following is implemented -
(1) Cleaning of the surface of a product , in a manner that causes the creation of sewage, by means of acids, alkaline substances, detergents, solvents, cyanide compounds and the like, substances that cause or are liable to cause the emission of pollutants;
(2) Coating of a surface area chemically or electrochemically;
(3) Treatment to prevent corrosion of a product, whether or not it is metallic, and toning a surface area of such a product;
(4) Manufacturing printed circuits in the microelectronics industries;
(5) Painting or coating with lacquer and coating with enamel;

"Operator" - any of the following:
(1) A holder of a business license of an plant which was granted under the Licensing of Businesses Law;
(2) A person under whose ownership, supervision or control a plant operates;

"Production line" - a facility or a part thereof in which at least one tank surface treatment is carried out;

"Effluent" - sewage after treatment;

"The Licensing Authority" - as per its meaning in the Licensing of Businesses Law, and in relation to a security related plant - as per its meaning in Section 29C of the said Law;

"Rinsing" - process in which pollutants are removed from the surface of a product by immersing it in a tank or by spraying liquids on a product above or within a receptacle;

"Counter-current rinsing" - process of rinsing a product that is carried out in several stages in which the product passes from one tank to another and the rinse water flows in the opposite

direction of the workflow;

"Sewage"- liquid waste which is intended for disposal from a plant, except for sanitary sewage;

"Sanitary sewage" - sewage that originates in sanitary conveniences or kitchen of a plant.

Prohibitions

3. (a) A person shall not operate a plant other than in accordance with the provisions of these regulations.

(b) A person shall not dilute sewage with sewage or water nor increase the consumption of water in the production line, with the object of reducing the concentration of pollutants in the sewage;

(c) A person shall not discharge sewage into a pre-treatment facility, other than after having taken all reasonable steps to reduce the quantities of sewage in the plant and also to prevent and reduce the washout and emission of pollutants from the manufacturing process into the sewage.

(d) A person shall not discharge sewage outside his plant, which has not been treated in a pre-treatment facility and whose pollutant concentration exceeds that stated in the Schedule; however, the Supervisor may approve the discharge of sewage directly to a sewage system, in a case in which the sewage does not contain pollutants in a concentration that exceeds that stated in the Schedule and where there is no risk of this.

(e) In addition to that stated in sub-regulation (d) a person shall not discharge sewage outside his plant whose pollutant concentration - except for the maximum concentration of suspended solids - exceeds that stated in the Schedule to these Regulations; for the purposes of this sub-regulation, "plant" - a "plant" as defined in Regulation 2 - and also any place in which products are processed or manufactured or services are provided, in a manner that causes sewage discharge; however, the Supervisor may approve a maximum concentration that exceeds that stated in the Schedule to these Regulations, if he is convinced that a plant uses best available technology.

(f) A person shall not dispose of sludge from his plant other

than in accordance with the provisions of the Licensing of Businesses Regulations (Disposal of Hazardous Substances Waste), 5751-1990.

Infrastructure to prevent pollution

4. An operator shall install and operate in his plant infrastructure for the prevention of water and soil pollution as detailed hereunder:

(1) The production lines and pre-treatment facilities shall be located in a roofed structure, protected from rain and drained as detailed in this regulation;

(2) A spill containment pallet shall be comprised of a flat surface and walls made of material which is impermeable and resistant to corrosion and permeation, and shall be installed in a manner that prevents leaks;

(3) A tank found in the production line (hereinafter - tank) shall be installed within a spill containment pallet whose volume is at least 10% greater than the volume of the larger tank within it, but a tank containing detergents or used for rinsing after surface treatment, need not be installed inside the spill containment pallet;

(4) A tank shall be installed on an elevated facility in a manner that enables monitoring of a possible leak from it; alternatively, the tank shall be made of a double wall and floor in a manner that enables control over a possible leak from the inner wall and floor to the outer wall and floor of the tank;

(5) Means of preventing dripping of liquids when a product is transferred between the tanks shall be installed between the tanks in the production line;

(6) A spill containment pallet which holds a tank containing an acidic solution shall be separated from a containment pallet holding a tank containing a cyanide solution, in a manner that prevents contact between the two solutions;

(7) The flooring of the production hall shall be resistant to corrosion and sealed against permeation, and gradients and drainage channels shall be installed which ensure drainage of any liquid on the floor into the appropriate treatment process in the pre-treatment facility in a manner that prevents contact between the cyanide solution and the acidic solution;

(8) A pipeline transporting sewage to the pre-treatment facility shall be permanent and corrosion resistant; the pipe shall be above ground or placed in a concrete canal coated with the corrosion resistant material or within a pipe which enables monitoring for leak detection from it;

(9) The sanitary sewage pipeline shall be connected to one of

the following:
(a) the sewage system - directly;
(b) The sewage pipeline, after the pre-treatment facility and after the site for the sampling of effluents;

Soil pollution

5 (a) Where the Supervisor has reasonable ground to suspect that soil situated in the vicinity of a plant has been polluted, he may order the operator of the said plant or the plant whose sewage is reasonably assumed to be the source of the pollution, to carry out soil sampling in accordance with his instructions; where the operator has not proceeded as instructed by the Supervisor, the Supervisor may carry out the said sampling;

(b) Where pollutants are discovered in the soil, either as a result of sampling as provided in sub-regulation (a) or in any other way, the operator shall dispose of the soil to a site designated for this purpose in accordance with the Supervisor's instructions.

Rinsing system

6. (a) Rinsing of a product after surface treatment shall be done by a rinsing system that is one of the following;
(1) a counter-current rinsing system comprised of three separate stages;
(2) A counter-current rinsing system comprised of at least two separate stages and an additional rinsing stage in which the rinse water is recycled.

(b) Notwithstanding that stated in sub-regulation (a) the Supervisor may approve a smaller number of rinsing stages if one of the following conditions is met:
(1) a rinsing system is installed and operated which will lead to a reduction of more than 90% in the amount of rinse water relative to the quantity of rinse water required for the use of a rinsing system in which there is only one stage;
(2) a system for sewage recycling is installed and operated in a manner which will enable a reduction of more than 90% in the quantity of sewage relative to that which occurs as a result of the use of only one rinsing stage in the production line;
(3) A system for recycling and disposal of a pollutant in sewage is installed and operated in a manner that will reduce the pollutant concentration by a rate of more than 90% relative to the concentration that is specified in the Schedule.

(c) The provisions of sub-regulation (a) shall not apply to a laboratory experiment line; for the purpose of this sub-regulation, "laboratory experiment line" - a production line intended for an experimental examination of different coating processes and with the volume of its tanks not exceeding 20 liters.

(d) Notwithstanding that stated in this regulation, the Supervisor may approve another rinsing provided that it is proved to his satisfaction that there is no danger of water source pollution,

Control system for the quantity of rinse water

7. In a production line that is constructed as stated in Regulation 6(a) (1), the quantity of rinse water in the rinsing process shall be controlled and regulated by a control system that is correlated to the production quantity or the amount of water used for rinsing.

Continuous use of concentrated solutions

8. An operator shall install all means necessary and economically feasible to enable continuous use, in so far as is possible, of solutions that are used in surface treatment, and including filtration systems, systems for separating pollutants and systems for separating grease from the solutions used for grease cleaning.

Additional treatment

9. In a pre-treatment facility, the sewage flows shall be treated as specified below:
(1) Sewage containing cyanides - shall be treated at a separate stage to the decomposition of the cyanides and shall be discharged for further treatment in the pre-treatment facility;
(2) Sewage that contains six-valent chrome - shall be treated in a process for removal of six-valent chrome or for reduction to three-valent chrome at a separate stage and shall be discharged for further treatment in the pre-treatment facility;
(3) Sewage containing mineral oil - shall be treated in an oil separator and shall be discharged for further treatment in the pre-treatment facility;
(4) Sewage containing metallic complexes or containing substances that are liable to create metallic complexes - shall be treated in a manner that enables proper functioning of the pre-treatment facility.

Treatment of sewage

10. An operator, whose plant discharges sewage that originates in a cadmium coating process, shall collect the sewage separately

containing cadmium

from the rest of the plant's wastewater and shall not discharge it outside the plant until after he has checked that the concentration of cadmium in the sewage that he treated does not exceed the value specified in the Schedule.

Pre-treatment facility

11. (a) A pre-treatment facility -
(1) Shall be established in a manner that does not allow the penetration into it of rainwater or runoff water.
(2) Shall be placed a spill containment pallet with the capacity to absorb the volume of the largest tank in the facility;
(3) Shall contain a system for sewage filtration.

(b) In the case of a pre-treatment facility that contains a tank that is dug into the ground - that tank shall be installed using the secondary containment method, where the external tank is made of rigid material that is resistant to corrosive material and permeation, and within which a secondary tank is installed in a manner that facilitates leakage control, in the space between it and the external tank, visually or by means of a sensor that automatically warns about a leak, and all so as to ensure that the bottom of the external tank will be dry at all times.

Spare parts for pre-treatment facility

12. An operator shall keep in a plant at all times, available and serviceable spare parts for a pre-treatment facility and including -
(1) A dosage pump for chemicals used for treating the plant's sewage;
(2) A reaction electrode, and in a facility in which a process of reduction of chromates and cyanide decomposition is carried out, also an oxidation reduction electrode;
(3) A pump – in a facility in which pumps are used

Systems for quality control of effluents and sewage

13 (a) In a tank for the sedimentation of heavy metals that is installed in a pre-treatment facility, and in the outlet of a pre-treatment facility, an instrument shall be installed for testing the acidity of the effluents, and in a plant where the quantity of effluents exceeds 2 cubic meters in any hour, continuous monitors of the acidity of sewage shall also be installed.

(b) In a plant where the supply of sewage containing cyanides or chromates exceeds 2 cubic meters in any given hour, a monitor of potential oxidation reduction shall be installed in the pre-treatment facility.

(c) The Supervisor may instruct an operator to install pH value and oxidation reduction potential monitors also when the sewage supplies of the plant are lower than said in sub-regulations (a) and (b), if a reasonable fear exists in the opinion of the Supervisor that the plant is not complying with the pollutant concentrations specified in the Schedule.

Mishap in a pre-treatment facility

14 Where a mishap has occurred in a pre-treatment facility, the discharge of sewage from the plant shall be stopped immediately; in this regulation "mishap" includes -

(1) Cessation of the electricity current in a manner that causes or is liable to cause damage to the treatment of sewage;

(2) Defective operation of the chemical dosage pumps or of pumps for the transfer of sewage;

(3) Non-flow of chemicals that are essential for treatment of sewage;

(4) Faulty functioning of the control system;

(5) Another failure in the operation of the pre-treatment facility.

Sewage sampling

15 (a) An operator shall carry out, at the request of the Supervisor or of the Licensing Authority, and no less than twice annually at six month intervals, sampling of sewage at the outlet of a pre-treatment facility for the purpose of laboratory analysis in order to detect pollutants in the manufacturing process; the sample shall be taken by a person who can do so reliably and results of such analysis shall be forwarded within 14 days to the Supervisor and to the Licensing Authority.

(b) For the purpose of sewage sampling, the sewage of the pre-treatment facility shall be discharged after filtration through a tank whose capacity is that of the effluent supply, for a period of two hours or ten cubic meters, whichever is the lower, and which shall not be less than 500 liters.

Penalties

16 A person who contravenes any of the provisions of these regulations shall be liable to that stated in Section 20U of the Water Law.

Commencement

17 (a) These Regulations shall enter into force three months from the date of their publication (hereinafter - the commencement date), but in a plant in which there is an existing production

line, the commencement date shall be as follows:
(1) Regulation 13 – twelve months from the commencement date;
(2) Regulations 7, 10 and 11 – eighteen months from the commencement date;
(3) Regulation 4(1) – twenty four months from the commencement date;
(4) Provisions of Regulation 4(2) - for sealing the surface of the spill containment pallet only; 4(4), (7) and (8) and Regulation 6 - four years from the commencement date;
(5) Compliance with the concentration of suspended solids as detailed in the Schedule – 100 milligrams per liter on the commencement date, 60 milligrams per liter two years from the commencement date and 30 milligrams per liter four years from the commencement date.

(b) Notwithstanding that stated in sub-regulation (a) the commencement of Regulation 3(e), concerning hospitals - nine months from the commencement date.

Schedule

(Regulations 2, 3(d) and (e), 6(b) (3), 10,13(c)and 17)

Maximum Pollutant Concentrations

Pollutant	Concentration (milligrams per liter)
Arsenic	0.1
Zinc	3.0 or the concentration in the water supplied to the plant with the addition of 3.0 milligrams per liter, whichever is the higher of the two
Tin	2.0
Aluminum	25.0
Silver	0.1
Mercury	0.05
Chrome-3 valent	0.5
Chrome- 6 valent	0.1
Nickel	0.5
Molybdenum	0.15
Lead	0.5
Cadmium	0.1
Cobalt	1.0
Suspended solids	30
Mineral oil	20
Total dissolved	

halogenated hydrocarbons (DOX), expressed as	
Chlorides	1
Total cyanides	0.5
Free chlorine	0.5
Copper	1.0 or the concentration in the water supplied to the plant with the addition of 1.0, whichever is the higher of the two
Manganese	1.0 or the concentration in the water supplied to the plant with the addition of 0.5, whichever is the higher of the two