

May 2012

Draft

Public Health Regulations (Prevention of Hazards) (Use of Coal Ash) 2012

Exercising the powers vested in me by section 62B (a) of the Public Health Ordinance, 1940 and pursuant to section 10 (a) of the Business Licensing Law, 1968 and pursuant to section 20D (a) (1) and (2) of the Water Law, 1959 and pursuant to section 7 of the Prevention of Hazards Law, 1961 and after consultation with the Minister of Health and the Water Council and with the approval of the Committee of Interior and the Protection of the Environment of the Knesset, I hereby formulate the following Regulations:

First Part – Definitions

1. In these Regulations-

"Coal Ash" -	<p>Particles obtained by the combustion of coal:</p> <p>(a) Floating particles referred to as "fly ash" in these Regulations; or</p> <p>(b) Settled particles referred to as "bottom ash" in these Regulations.</p>
"Site for Interim Storage"	A site operated by the Company or under the control or supervision thereof used or intended to be used for the interim storage of Coal Ash;
"Site for Disposal of Coal Ash"	A site approved by the Supervisor as suitable for the disposal of Coal Ash residues;
"Owner of a Plant"	<p>Each of the following:</p> <p>(1) Holder of a business license granted under the Business Licensing Law, 1968</p> <p>(2) A person who owns, controls or supervises a Plant;</p>
"The National Professional Echelon"	A committee established under Government Decision No. 282 of 23.12.1979.
"The Company"	Israel Electricity Company Ltd., a manufacturer of energy from coal or an entity controlled by them;

"The Supervisor"	The person appointed by the Minister for Environmental Protection for the purpose of these Regulations;
"A Person Authorized to Conduct Inspection"	A licensed engineer registered pursuant to the provisions of section 13A of the Engineers and Architects Law, 1958.
"Coal Ash Products"	Products containing more than 1% of their total weight Coal Ash
"Coal Ash Board"	An inter-ministerial governmental body in which the following entities participate: the Ministries of Energy and Water, Environmental Protection and Interior as well as the Company and the National Company for Coal Supply Ltd., the purpose of which is to regulate the handling of Coal Ash.
"Authorized Laboratory"	A laboratory authorized by the National Authority for Authorizing Laboratories pursuant to the National Authority for Authorizing Laboratories Law, 1997 or another laboratory approved by the Supervisor.
"Operator of a Power Station"	The manager of a power station.
"Operator of a Site for Interim Storage"	The possessor of or a person responsible for the management or operation of a Site for Interim Storage.
"Plant"	A business or public institution which uses a quantity of Coal Ash exceeding 5 tons per annum, other than a power station.
"Paving Specifications"	Specifications for use of Coal Ash for paving published by the Coal Ash Board from time to time, in its most updated form, a copy of which is to be found in the offices of the Coal Ash Board in Tel-Aviv and in the Ministry of Energy and Water in Jerusalem for public review.
"Infrastructure Specifications"	Specifications for use of Coal Ash for infrastructure works published by the Coal Ash Board, a copy of which is to be found in the offices of the Coal Ash Board in Tel-Aviv and in the Ministry of Energy and Water in Jerusalem for public review.

"Installations"	Installations for unloading, storage, sorting, processing or transporting Coal Ash, a wastewater treatment plant, a drainage system, monitoring and control installations, operating surfaces and a sealing system.
"Operating Surfaces"	Surfaces on which the activity of storage, transportation and processing of Coal Ash or treatment of wastewater is performed.
"Disposal"	Removal not for storage purposes or use.
"Infrastructure Works"	Paving or earth filling works on land or in the sea.
"Use"	Including manufacture, processing, supply, import, commerce, sale, loading, unloading, transfer, storage, possession, collection, carriage, transportation, shipment or any other act involving Coal Ash and products thereof.
"Power Station"	A power station heated by coal as a source of energy, partially or fully, and as a result of the combustion thereof, Coal Ash is created.
"Leachates"	Liquids that come into contact with Coal Ash and which contain Coal Ash or components thereof.
"Compound Daily Sampling"	Sampling performed by the collection of samples at a frequency of one sample per hour at least, for 24 consecutive hours, and the combination thereof.

Second Part - General

Use of Coal Ash

2. No person shall use Coal Ash or Coal Ash Products except as prescribed by these Regulations.

Removal of Coal Ash from a Power Station and from a Site for Interim Storage and Use thereof

3. (a) An Operator of a Power Station shall not remove and shall not permit any other person to remove Coal Ash from a Power Station, except to a person who has a permit from the National Professional Echelon to receive Coal Ash (hereinafter "a Permit to Receive Coal Ash") and in accordance with the terms thereof.

- (b) Notwithstanding the provisions of sub regulation (a), the Operator of a Power Station may remove Coal Ash as stated above, for the purpose of transferring it to a Site for Interim Storage, provided it has received a permit from the National Professional Echelon for storage (hereinafter "a Permit for Storage of Coal Ash") and in accordance with the terms thereof.
- (c) An Operator of a Site for Interim Storage shall not remove and shall not permit any other person to remove Coal Ash from a Site for Interim Storage except to a person who has a Permit to Receive Coal Ash and in accordance with the terms thereof.
- (d) A person shall not dispose of Coal Ash without a permit from the National Professional Echelon for Disposal (hereinafter "a Permit for Disposal of Coal Ash") and in accordance with the terms thereof.
- (e) An Operator of a Power Station and an Operator of a Site for Interim Storage shall keep records of the details of removal of Coal Ash in accordance with the form attached to the First Addendum.

Application for a Permit to Receive Coal Ash from a Power Station and from a Site for Interim Storage

- 4. (a) An application for a Permit to Receive Coal Ash shall be submitted to the National Professional Echelon in accordance with the form attached in Part A of the second Addendum.
- (b) If the application for a Permit to Receive Coal Ash includes Use thereof for Infrastructure Works, the applicant shall attach to the application form the following approvals:
 - (1) An approval from the supervisor of water quality in the Governmental Authority for Water and Sewage provided that such approval shall not be required for Use of Bottom Ash in a cumulative amount which does not exceed 5,000 tons, in a radius of up to 5 kilometers, for projects which have been completed in the last 5 years.
 - (2) An approval from the Ministry of Health in Protective Area C as this term is defined in the Public Health Regulations (Sanitation Terms for Drilling Drinking Water) 1995.
- (b) (1) The National Professional Echelon shall make the issue of a Permit to Receive Coal Ash for a quantity exceeding 20,000 Tons for Infrastructure

Works contingent upon the provision of a report by a Person Authorized to Conduct Inspection on the performance of the Use in accordance with the terms prescribed by him, at the end of the Use or at any other time.

- (c) If the application for a Permit to Receive Coal Ash includes Use thereof for earth filling in the sea, the applicant shall attach to the application form the following approvals:
 - (1) An approval from the Committee for Granting Permits appointed pursuant to section 3 of the Prevention of Pollution of Seawater from Land Based Sources Law, 1988;
 - (2) An approval from the Committee for Coastal Water pursuant to the Second Addendum to the Planning and Construction Law, 1965.
- (d) If the application for a Permit to Receive Coal Ash includes Use thereof in construction products for buildings in which people will stay or intended for people to stay in, the applicant shall attach to the application form an approval from an Authorized Laboratory for radiation tests confirming that the construction product meets the requirements of the Israeli Standard for Radiation applicable to Construction Products (Standard 5098) and the Concrete Standard: Requirements, Functioning and Manufacture (Israeli Standard 118).
- (e) If the application for a Permit to Receive Coal Ash includes Use thereof in construction products containing more than 50 percent Coal Ash, the applicant shall attach to the application form an approval from an Authorized Laboratory for testing Wastewater confirming that the Coal Ash meets the values listed in the Fourth Addendum to the Regulations.
- (f) If the application for a Permit to Receive Coal Ash includes a Use which is not specified in the Third Addendum, the applicant shall attach to the application form also an approval from the Supervisor.
- (g) The National Professional Echelon may require the applicant to provide further information.

Liability of an Operator of a Power Station for the Quality of Coal Ash

- 5. (a) An Operator of a Power Station shall not remove and shall not permit any other person to remove Coal Ash from a Power Station which does not meet the maximum values specified in the Fourth Addendum, except with the approval of the Supervisor.

- (b) An Operator of a Power Station shall conduct in an Authorized Laboratory a test of the quality of the Coal Ash at least once every six months or at any date as determined by the Supervisor and the Supervisor may order a method of sampling or analysis on the basis of which the test shall be conducted.
- (c) The results of the test shall be kept by the Operator of a Power Station for at least three years and shall be made available to the Supervisor at his request.

Disposal

- 6. (a) An Operator of a Power Station shall not dispose of Coal Ash from a Power Station other than to a Site for Disposal of Coal Ash approved by the Supervisor and in accordance with the terms thereof and after it has been proven to his satisfaction that one of the following terms has been fulfilled:
 - (1) There is no feasible option from an economic point of view allowing the removal of the Coal Ash from the Power Station for a Use permitted under these Regulations and there is no possibility of interim storage;
 - (2) The continued retention of the Coal Ash in the Power Station may cause harm to the environment or to public health or obstruct the operations of the Power Station.
- (b) An Operator of a Site for Interim Storage shall not dispose and shall not permit another to dispose of Coal Ash from the Site for Interim Storage, other than to a Site for Disposal of Coal Ash approved by the Supervisor.
- (c) An Owner of a Plant shall not dispose and shall not permit another to dispose of Coal Ash from the Plant, other than to a Site for Disposal of Coal Ash waste and if the quantity of Coal Ash exceeded 10 tons per annum, it shall dispose of it with an approval from the Supervisor.

Third Part – Prevention of Environmental Hazards

Prevention of Water Pollution

- 7. An Owner of a Plant shall make Use of Coal Ash in a manner which does not cause or may not cause water pollution and shall take all the steps required under these Regulations to prevent water pollution.

Requirements for Operating Surfaces

8. An Owner of a Plant shall store Coal Ash only on Operating Surfaces intended for this purpose and which meet the following requirements:
 - (a) The Operating Surfaces shall have a minimal incline of 2% in the direction of a system for collection of leachates;
 - (b) The Operating Surfaces shall be drained into a system for collection of Leachates;
 - (c) The Sealing System will contain a layer of a material resistant to the types of effluents produced by the business with which the Coal Act may come in contact, to solar radiation and to climate hazards and to mechanical damage;
 - (d) The rate of percolation through the Sealing System shall not exceed 3 centimeters per annum (10^{-9} cm/second);
 - (e) The Operating Surfaces as well as walls and ramps shall be sealed and resistant to any mechanical damage;
 - (f) Walls and ramps in the zone of the Operating Surfaces which come into contact with the Coal Ash shall be sealed;
 - (g) The efficiency of the sealing shall be tested by the best available and economically viable technological means.

Drainage and Collection of Wastewater

9. An Owner of a Plant shall install in the site where Coal Ash is kept separate collection and transmission systems for leachates, sanitary waste and surface runoff in accordance with the following provisions:
 - (a) Surface runoff outside the area of the site shall be drained in a manner which prevents the entry thereof into the area of the site;
 - (b) The system for collection of Leachate shall allow drainage of a quantity of Leachate which may be formed in the wetting process and also as a result of a rain storm with a probability of 1 to 25 years in the storage area;
 - (c) Leachates shall not be discharged from a system for collection of Leachates into the public sewage system, unless the quality thereof is not less than that prescribed in any law relating to the quality of waste discharged into the sewage system.

Provisions on Sampling

10. (a) An Owner of a Plant shall install at the exit of the Leachate collection system into the public sewage system the following continuous meters: a flow meter, a pH meter and an electrical conductivity meter and the following provisions shall apply to the maintenance and operation of the meters:
- (1) All the devices shall be installed with a recorder or with means that enable maintaining data on a computer;
 - (2) The continuous meters shall be in good working order at all times;
 - (3) Tests and calibration of the meters shall be performed in accordance with the manufacturer's instructions and the frequency thereof shall be no less than once a year.
- (b) Once every three months the Owner of the Plant shall conduct a Compound Daily Sampling of the Leachate at the exit of the Leachate collection system to the public sewage system, employing an Authorized Laboratory, which shall include the elements specified in the Fourth Addendum.
- (c) Results of the samples specified in subsections (a) and (b) above shall be kept by the Owner of the Plant for at least 3 years and shall be made available for review by the Supervisor, at his request.

Prevention of Unreasonable Air Pollution

11. An Owner of a Plant shall operate a site where Coal Ash is kept and shall maintain it in a manner which will prevent a deviation from the environmental values defined in the Clean Air Regulations (Air Quality Values) (Temporary Order) 2011.

Unreasonable Air Pollution from a Plant

12. Each of the following constitutes unreasonable air pollution from a Plant:
- (a) Settling particles of Coal Ash, the source of which is from the Plant within the boundary of the Plant, in a quantity exceeding 20 tons per square kilometer per month;
 - (b) A concentration of airborne particles, the source of which is from the Plant within the boundary of the Plant, exceeding 0.3 milligrams per

cubic meter in a measurement lasting 3 consecutive hours, or 0.2 milligrams per cubic meter in a measurement lasting 24 consecutive hours.

- (c) A concentration of mini-particles, the source of which is from the Plant with a diameter not exceeding 10 microns, in the boundary of the Plant, exceeding 0.15 milligrams per cubic meter in a measurement lasting 24 consecutive hours or 0.06 milligrams per cubic meter in a measurement lasting 1 consecutive year.

Fourth Part – Use of Coal Ash Products

- 13. A person shall not make Use of Coal Ash including reuse thereof, except in accordance with the terms prescribed by the National Professional Echelon in the Permit to Receive Coal Ash.

Use of Coal Ash for Infrastructure Works

- 14. A person shall not use Coal Ash for Infrastructure Works, except in accordance with the environmental requirements in the Paving Specifications or Infrastructure Specifications, as the case may be.

Fifth Part – Miscellaneous Provisions

Suspension of a Permit and Revocation thereof

- 15. If the Supervisor is convinced that a person who received Coal Ash pursuant to a Permit to Receive Coal Ash breached any of the terms of the Permit or that the continued Use of Coal Ash by the recipient of the Permit will cause or may cause a significant health or environmental hazard (hereinafter, "Hazard"), he may suspend the Permit until the fulfillment of the terms which were not fulfilled or until steps are taken to prevent the Hazard or to restore the situation to the former state. The suspension of the Permit should be executed by a notice in writing delivered to the recipient of the Permit which stipulates the grounds for suspension of the Permit and the actions to be performed by the recipient of the Permit and the deadline for the performance thereof.
- 16. If the acts which the recipient of the Permit was required to perform under the notice pursuant to regulation 15 above are not performed by the date prescribed by the Supervisor in the notice, the National Professional Echelon may rescind the Permit by a notice in writing delivered to the recipient of the Permit.

17. The National Professional Echelon shall not order the revocation of the Permit until it has given the recipient of the Permit a fair opportunity to present his reasoned objection.

Appeal

18. A person harmed by a decision of the National Professional Echelon to rescind a Permit pursuant to regulation 16 above, may appeal in writing to the General Manager of the Ministry of Environmental Protection within seven days of the date of receipt of the decision of the National Professional Echelon.

Penalties

19. A person infringing on any provision of these Regulations shall be subject to six months imprisonment or a fine as stated in section 61(a)(1) of the Penal Code, 1977.

Commencement

20. These Regulations shall begin to apply six months after the publication thereof.

First Addendum

(Regulation 3(e))

Form for Recording Details of Removal of Coal Ash from a Power Station/ Site for Interim Storage

1. Quantity of Coal Ash removed.
2. Date of removal.
3. Destination of removal.
4. Intended Use.

Second Addendum

(Regulation 4(a))

Application Form for Removal of Coal Ash from a Power Station

(To be submitted by the applicant for a permit)

1. Application

Name of the company

Name of the Plant

Name of the applicant

The requested Use

Intended quantities (for a period and/or project) according to the type of Coal Ash

Description of the process of Use of the Coal Ash

Description of the means for preventing environmental hazards at every stage of the process (reception, transportation, unloading, storage and use)

Details of the destinations of the Coal Ash for the Uses permitted under these Regulations

A declaration undertaking to comply with the requirements of these Regulations and the conditions in the Permits of the entities specified in these Regulations, if such conditions were set.

2. Permits for Use – as required by these Regulations.

Third Addendum

(Regulation 4 (f))

Products Exempt from the Supervisor's Approval

Cement

Concrete, including imported concrete

Construction products for infrastructure and buildings not intended for people to stay in.

Fourth Addendum

(Regulation 5)

Maximum values for Coal Ash Leachates as set by ... (to be determined prospectively)

Minister for Environmental Protection

Date: