

**LAW NUMBER 4 of 1994\***

***PROMULGATING***

***THE ENVIRONMENT LAW***

**and its**

**EXECUTIVE REGULATION**

**EGYPT**

\* In case of difference of interpretation, the Arabic text will prevail

**LAW NUMBER 4 of 1994**

***PROMULGATING***

***THE ENVIRONMENT LAW***

***PRESIDENTIAL DECREE***

**EGYPT**

**LAW NUMBER 4 OF 1994**  
**PROMULGATING THE ENVIRONMENT LAW**

In the name of the People  
The President of the Republic  
The People's Assembly has ratified the following law which we have  
sanctioned and promulgated :

**ARTICLE (1)**

WITHOUT PREJUDICE TO THE RULES AND PROVISIONS SET FORTH IN SPECIAL LAWS, THE PROVISIONS OF THE ATTACHED LAW SHALL APPLY IN RESPECT OF THE ENVIRONMENT.

ESTABLISHMENTS EXISTING AT THE TIME OF THE ENACTMENT OF THIS LAW ARE HELD TO ADJUST THEIR STATUS IN LINE WITH ITS PROVISIONS WITHIN THREE YEARS FROM THE DATE OF PUBLICATION OF ITS EXECUTIVE REGULATIONS, WITHOUT PREJUDICE TO THE APPLICATION OF THE PROVISIONS OF LAW 48/1982 CONCERNING THE PROTECTION OF THE RIVER NILE AND WATERWAYS FROM POLLUTION.

THE CABINET MAY, ON THE BASIS OF A PROPOSAL BY THE MINISTER IN CHARGE OF ENVIRONMENTAL AFFAIRS, EXTEND THIS GRACE PERIOD FOR NO MORE THAN TWO YEARS, IF NECESSARY AND IF THE CABINET IS SATISFIED THAT SERIOUS PROCEDURES HAVE BEEN TAKEN TO PUT PROVISIONS OF THE ATTACHED LAW INTO FORCE .

**ARTICLE (2)**

THE PRIME MINISTER SHALL, ON THE BASIS OF A PROPOSAL BY THE MINISTER IN CHARGE OF ENVIRONMENTAL AFFAIRS AFTER CONSULTING THE BOARD OF DIRECTORS OF THE ENVIRONMENTAL AFFAIRS AGENCY<sup>(1)</sup>, ISSUE THE EXECUTIVE REGULATIONS OF THE ATTACHED LAW WITHIN SIX MONTHS FROM THE DATE ON WHICH IT COMES INTO FORCE.

THE MINISTERS SHALL, EACH IN HIS RESPECTIVE AREA OF COMPETENCE, ISSUE THE RATES AND PERCENTAGES REQUIRED TO IMPLEMENT THE PROVISIONS OF PART II OF THE ATTACHED LAW, WITHOUT PREJUDICE TO THE PROVISIONS OF ARTICLE (5), WITHIN THE PERIOD MENTIONED IN THE PREVIOUS PARAGRAPH.

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<sup>(1)</sup> SHALL BE ABBREVIATED AS EEAA.

### **ARTICLE (3)**

LAW 72 OF 1968 CONCERNING THE PREVENTION OF POLLUTION OF SEA WATER BY OIL IS HEREBY REPEALED, AS ARE ALL OTHER PROVISIONS RUNNING COUNTER TO THE PROVISIONS OF THE ATTACHED LAW.

### **ARTICLE (4)**

THIS LAW SHALL BE PUBLISHED IN THE OFFICIAL GAZETTE AND SHALL COME INTO FORCE ON THE DAY FOLLOWING THE DATE OF ITS PUBLICATION.

- THIS LAW SHALL BE STAMPED WITH THE SEAL OF STATE AND ENFORCED AS A LAW OF THE STATE.
- ISSUED AT THE PRESIDENCY OF THE REPUBLIC ON 15 SHAABAN HEJIRA YEAR 1414 (CORRESPONDING TO 27 JANUARY, 1994).

**Signed by**  
**"HOSNY MOBARAK"**

**LAW NUMBER 4 of 1994**

***PROMULGATING***

***THE ENVIRONMENT LAW***

**EGYPT**

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## PRELIMINARY PART

### CHAPTER ONE

#### GENERAL PROVISIONS

##### Article 1:

In the application of the provisions of this Law, the following words and expressions shall have the meanings hereby assigned to them:

**1. Environment:**

The biosphere which encompasses living organisms together with the substances it contains and the air, water and soil that surround it, as well as the establishments set up by man.

**2. Air:**

The mixture of gases constituting air in its known percentages and natural properties, and in the provisions of this Law, it is the ambient air, air within the work places, and air in closed or semi-closed public places.

**3. The Convention:**

The International Convention for the Prevention of Marine Pollution from Ships (1973-1978), and international conventions, to which the Arab Republic of Egypt adheres, in the area of the protection of the marine environment from pollution and compensation for pollution accidents.

**4. Public Place:**

A place equipped to receive people or a specific category of people for any purpose.

**5. Closed Public Place:**

A public place which is in the form of an integrated building that receives no incoming air except from designated inlets. Vehicles for public transport are considered closed public places.

**6. Semi-closed Public Place:**

A public place which is in the form of a non-integrated building with direct access to the ambient air and which cannot be completely closed.

**7. Environmental Pollution:**

Any change in environmental properties which may result directly or indirectly in harming living organisms or establishments or in affecting the ability of people to lead a normal life.

**8. Environmental Degradation:**

Effect on the environment that reduces its value, or changes its nature, depletes its resources or harms living organisms or monuments.

**9. Environmental Protection:**

Protecting and promoting the components of the environment and preventing or reducing their degradation or pollution. These components encompass air, seas, internal waters, including the river Nile, lakes and subterranean water, land, natural protectorates, and other natural resources.

**10. Air Pollution:**

Any change in the properties or specifications of the natural air which causes hazards to human health or to the environment, whether resulting from natural factors or human activities, including noise.

**11. Rapid Transport Vehicles:**

Motor cars, tractors, motorcycles and other machines designed for use on public roads.

**12. Water Pollution:**

The introduction of any substance or energy into the water environment, whether intentionally or unintentionally, directly or indirectly, which causes damage to living or non-living resources, poses a threat to human health or hinders water activities, fishing and tourist activities or impairs the quality of sea water so as to render it unfit for use, diminish the enjoyment thereof or alter its properties.

**13. Polluting Substances and Factors:**

Any solid, liquid or gaseous substances, noise, radiation, heat, or vibrations arising from acts of man that lead directly or indirectly to environmental pollution or degradation.



**14. Water Polluting Substances:**

Any substance whose discharge into the water environment, intentionally or unintentionally, leads to a change in its properties, or contributes to such change directly or indirectly to an extent that can harm man, natural resources, sea water or marine tourist areas, or which interferes with other legitimate uses of the sea. These substances include:

- A- Oil or oily mixtures.
- B- Harmful and dangerous wastes as determined in the international conventions to which the Arab Republic of Egypt adheres.
- C- Any other substance (solid, liquid or gaseous) as determined in the executive regulations of this law.
- D- Untreated industrial waste or effluents from industrial establishments.
- E- Toxic military containers.
- F- Substances listed in the Convention and its annexes.

**15. Oil:**

Crude oil and its products in all forms, including any kind of liquid hydrocarbons, lubricating oil, fuel oil, refined oil, furnace oil, tar and other petroleum derivatives or waste.

**16. Oily Mixtures:**

Any mixture containing oil in a ratio of more than 15: 1,000,000.

**17. Unclean Balancing Water (Unclean Ballast Water):**

Water in ship-borne tanks if its oil content is greater than 15:1,000,000.

**18. Hazardous Substances:**

Substances having dangerous properties which are hazardous to human health, or which adversely affect the environment, such as contagious, toxic, explosive or flammable substances or those with ionizing radiation.

**19. Hazardous Waste:**

Waste of activities and processes or its ashes which retain the properties of hazardous substances and have no subsequent original or alternative uses, like clinical waste from medical treatments or the waste resulting

from the manufacture of any pharmaceutical products, drugs, organic solvents, printing fluid, dyes and painting materials.

**20. Substance Handling:**

Anything that leads to the displacement of substances for the purpose of assembling, transporting, storing, treating, or using them.

**21. Waste Management:**

Collecting, transporting, recycling and disposing of waste.

**22. Waste Disposal:**

Processes which do not extract or recycle waste such as composting, deep subterranean injection, discharge to surface water, biological treatment, physio-chemical treatment, permanent storage or incineration.

**23. Waste Recycling:**

Processes which allow the extraction or recycling of waste, such as using it as fuel, or extracting metals and organic materials or soil treatment or oil re-refining.

**24. Liquid Substances Harmful to the Water Environment:**

The substances listed in the International Convention of 1973/1978.

**25. Reception Facilities:**

Installations, equipment and basins designed to receive, filter, treat and dispose of contaminated substances or ballast water, as well as installations provided by companies working in the field of shipping and unloading petroleum products; or other administrative agencies supervising ports and waterways.

**26. Discharge:**

Any leakage, effusion, emission, draining or disposal of any kind of pollutants into the waters of the territorial sea, the exclusive economic zone, the sea, the river Nile and the waterways, taking into consideration the levels determined for certain substances in the executive regulations.

**27. Dumping:**

A- Any deliberate disposal of polluting substances or waste from ships, planes, platforms or other industrial establishments and land-based sources into the territorial sea, the exclusive economic zone or the sea.

B- Any deliberate dumping by ships or industrial or other establishments into the territorial sea, the exclusive economic zone or the sea.

**28. Compensation:**

Means compensation for the damage resulting from pollution accidents in accordance with the application of the provisions of the Civil Code and the provisions of the International Convention on Civil Liability to which the Arab Republic of Egypt adheres or to which it will adhere in future, including the International Convention on Civil Liability for Damage Caused by Oil Pollution Accidents signed in Brussels in 1969, or any other pollution accidents mentioned in the executive regulations of this Law.

**29. Means of Oil Transport:**

Every pipeline used in transporting oil and any other equipment used in loading, unloading or transporting oil, as well as pumps or other equipment required for the use of these pipes.

**30. Ship:**

Any floating marine vessel of any type, vessels which move over hydrofoil cushions or underwater establishments. Also, any fixed or mobile establishment constructed along the coasts or on surface water for the purpose of conducting commercial, industrial, touristic or scientific activities.

**31. War Ship:**

Any ship that belongs to the armed forces of a state, carrying its distinct external insignia, under the command of an officer officially appointed by the government of such state and operated by a crew governed by the rules of military discipline of that state.

**32. Government Ship:**

A ship owned by the state and operated or used for governmental and non-commercial purposes.

**33. Harmful Materials Carrier:**

A ship constructed originally or redesigned for the purpose of carrying cargoes of harmful liquid substances in bulk, including oil tankers when fully or partially loaded with harmful liquid substances not packed in accordance with the provisions stated in Chapter One, Part Three of this Law.

**34. Establishment:**

Establishment means the following:

- Industrial establishments subject to the provisions of Law No. 21 of 1958 and Law No. 55 of 1977.
- Tourist establishments subject to the provisions of Law No. 1 of 1973 and Law No. 1 of 1992.
- Establishments used for electrical power generation and production which are under the provisions of laws Nos. 145/1948, 63/1974, 12/1976, 13/1976, 27/1976, and 103/1986.
- Mines, quarries and establishments operating in the field of oil exploration, drilling, transportation and usage which are subject to the provisions of laws Nos. 66/1953, 86/1956, 61/1958 and 4/1988.
- All infrastructure projects.
- Any other establishment, activity or project which may have a noticeable impact on the environment . These shall be determined by a decision issued by the Environmental Affairs Agency in agreement with the competent administrative authority.

**35. Environmental Monitoring Networks:**

Agencies which undertake, within their spheres of competence and through their stations and work units, to monitor the components and pollutants of the environment and relay their results and data to the competent authorities periodically.

**36. Environmental Impact Assessment:**

Studying and analyzing the environmental feasibility of proposed projects, whose construction or activities might affect the safety of the environment in order to protect it.

**37. Environmental Disaster:**

An accident resulting from natural factors or human action which causes severe damage to the environment and requires resources beyond the local means.

**38. The competent Administrative Agency Concerned with the Protection of the Water Environment:**

Any of the following agencies, each within its field of competence:

- A- The Environmental Affairs Agency (EEAA)
- B- The Department of Ports and Lighthouses.
- C- The Suez Canal Authority.
- D- Port Authorities in ARE.
- E- The General Egyptian Organization for the Protection of the Coast.
- F- Egyptian General Petroleum Corporation. (EGPC).
- G- General Department of Surface Water Police.
- H- Tourism Development Authority.
- I- Other agencies designated by a Prime Ministerial Decree.

## **CHAPTER TWO**

### **THE ENVIRONMENTAL AFFAIRS AGENCY**

**Article 2:**

An agency for the protection and promotion of the environment shall be established within the cabinet premier ship under the name the "Environmental Affairs Agency". The Agency shall have a public juridical personality and shall be affiliated to the competent Minister for Environmental Affairs. It shall have an independent budget and its head office shall be located in Cairo. The Minister for Environmental Affairs may establish branches for the Agency in the governorates by ministerial decree, priority to be given to industrial areas.

**Article 3:**

The chairman of the Agency shall be appointed on the basis of the nomination of the Minister for Environmental Affairs and the proposal of the Prime Minister. His appointment shall be effected by a presidential decree which shall include his financial remuneration

**Article 4:**

The Environmental Affairs Agency shall replace the agency established by Presidential Decree 631 of 1982 in all its rights and obligations, and the employees of the said agency shall be transferred with their grades and seniority to the Environmental Affairs Agency.

## **Article 5:**

The Agency shall formulate the general policy and lay down the necessary plans for the protection and promotion of the environment and follow up the implementation of such plans in coordination with the competent administrative authorities. The Agency shall have the authority to implement some pilot projects.

The Agency shall be the national authority responsible for strengthening environmental relations between the ARE and other countries and regional and international organizations. The Agency shall recommend taking the necessary legal procedures to adhere to regional and international conventions related to the environment and prepare the necessary draft laws and decrees required for the implementation of such conventions.

For the fulfillment of its objects, the Agency may:

- Prepare draft laws and decrees related to the fulfillment of its objects and express its opinion on proposed legislation related to the protection of the environment.
- Prepare studies on the state of the environment, formulate the national plan with the projects included for the protection of the environment, prepare the estimated budgets for each as well as environmental maps of urban areas and areas to be developed and lay down the criteria to be observed when planning and developing new areas as well as the criteria targeted for old areas.
- Lay down the criteria and conditions which owners of projects and establishments must observe before the start of construction and during the operation of these projects.
- Draw up a comprehensive list of national institutions and organizations as well as of qualified individuals who could contribute in the preparation and execution of environmental protection programmes and could be made use of in preparing and implementing the projects and studies undertaken by the Agency.
- Conduct field follow-up of compliance with the criteria and conditions that are binding to agencies and establishments and take the procedures prescribed by law against those who violate such criteria and conditions.
- Lay down and follow up the rates and percentages necessary to ensure that permissible levels of pollutants are not exceeded.
- Gather national and international information on the environmental situation and the changes affecting it on a periodical basis in cooperation with the information centres of other agencies, publish such information and evaluate and utilize it in environmental management and planning.

- Lay down the principles and procedures for assessing the environmental effects of projects.
- Prepare an environmental contingency plan in the manner stated in article 25 of this Law and coordinate with the competent bodies in the preparation of programmes to face environmental disasters.
- Lay down a plan for environmental training and supervise its implementation.
- Participate in the preparation and implementation of the national programme for environmental monitoring and make use of the data provided thereby.
- Compile and publish periodic reports on the main environmental indicators.
- Prepare programmes for the environmental education of the public and assist in their implementation.
- Coordinate with other competent authorities in connection with regulating and setting safety standards for the conveyance of hazardous materials.
- Administer and supervise natural protectorates.
- Prepare the draft budgets required for the protection and promotion of the environment.
- Follow up the implementation of international and regional conventions related to the environment.
- Propose economic mechanisms to encourage different activities and procedures for the prevention of pollution.
- Implement pilot projects for the preservation of natural resources and the protection of the environment from pollution.
- Coordinate with the Ministry for International Cooperation to ensure that projects funded by donor organizations and countries are in line with environmental safety considerations.
- Participate in laying down a plan to protect the country from leakages of hazardous substances and waste causing environmental pollution.
- Participate in the preparation of an integrated national plan for the administration of coastal areas abutting on the Mediterranean Sea and the Red Sea in coordination with the authorities and ministries concerned.

- Participate with the Ministry of Education in the preparation of training programmes for the protection of the environment within the scope of the various curricula in the basic education stage.
- Prepare an annual report on the environmental situation to be submitted to the President of the Republic and the Cabinet, a copy of which shall be deposited at the People's Assembly.

**Article 6:**

The Board of Directors of the Agency shall be chaired by the Minister in charge of Environmental Affairs and composed of the following members:

- The CEO of the Agency, who shall be the deputy chairman of the Board.
- A representative from each of six ministries selected by the Prime Minister from the ministries concerned with the environment, provided the representative of each ministry shall be a high-ranking official selected by the competent minister.
- Two experts in the field of environmental affairs selected by the Minister in charge of Environmental Affairs.
- Three representatives from non-governmental organizations concerned with the environment selected in agreement with the Minister in charge of Environmental Affairs.
- A high-ranking employee of the Environmental Affairs Agency selected by the Minister in charge of Environmental Affairs on the basis of a proposal by the CEO of the Agency.
- The head of the Legal Opinions Department at the Council of State.
- Three representatives from the public business sector selected by the Minister in charge of Environmental Affairs.
- Two representatives from universities and scientific research centres selected by the Minister in charge of Environmental Affairs.

Representatives of the ministries concerned shall be invited whenever subjects related to the sectors under their supervision are discussed by the Board. The Board may solicit the assistance of experts having no counted vote in the deliberations when considering specific issues. The Board of Directors may form advisory committees of experts to study certain subjects and may entrust one or more of its members with a specific task.



**Article 7:**

The Agency's Board of Directors is the supreme authority governing its affairs, running its business and drawing up the general policy it will follow. The Board may adopt whatever resolutions it deems necessary to fulfill the objects for which the Agency was established, within the framework of the national plan and in accordance with the executive regulations of this Law.

**Article 8:**

The Board of Directors shall meet at the invitation of its Chairman at least once every three months or at the request of half of its members. Board Meetings shall be valid if attended by half the number of its members. Resolutions shall be taken by a majority of the voting members attending the meeting. In case of a tie, the Chairman shall have the casting vote.

**Article 9:**

If the Chairman of the Board is absent or cannot attend the meeting he shall be replaced by the deputy Chairman.

**Article 10:**

The Chairman of the Board shall represent the Agency in its relation with third parties and before the courts.

**Article 11:**

The CEO of the Agency shall be responsible for the implementation of the general policy adopted to fulfill its objects and for implementing the resolutions of the Board of Directors. The executive regulations of this Law shall determine his other powers.

**Article 12:**

The Agency shall have a Secretary-General appointed from high-ranking Agency employees by a decree of the Minister in charge of Environmental Affairs after consulting the CEO, he shall assist the CEO and work under his supervision.

**Article 13:**

The CEO of the Agency shall have the ministerial powers prescribed in laws and regulations over Agency employees, with regard to whom , the Secretary-General shall have the authority of the head of the sector

**CHAPTER THREE**  
**ENVIRONMENT PROTECTION FUND**

**Article 14:**

A special fund shall be established in the Agency under the name "the Environment Protection Fund" to which shall devolve:

- a. Amounts allocated in the state budget to subsidize the fund.
- b. Grants and donations presented by national and foreign organizations and accepted by the Board of Directors of the Agency for the purpose of protecting and promoting the environment.
- c. Fines levied and damages awarded or agreed upon for any harm caused to the environment.
- d. The financial resources of the protectorates fund provided for in Law 102 of 1983.

Amounts collected on a temporary basis on account of fines and damages for harm caused to the environment shall be deposited in the fund and held in trust.

The fund shall have a special balance sheet and its fiscal year shall commence and end with that of the state. Any surplus shall be carried over to the following year. The money in this fund shall be deemed public money.

**Article 15:**

The resources of the fund shall be allocated to the fulfillment of its objects.

**Article 16:**

The Agency shall lay down the internal regulations of the fund in agreement with the Minister of Finance. All the activities and transactions of the fund shall be subject to the control of the Central Audit Agency.

## **CHAPTER FOUR INCENTIVES**

### **Article 17:**

The agency shall, in collaboration with the Ministry of Finance, establish a system of incentives that the Agency and the competent administrative departments can present to other agencies, establishments, individuals and others for their environmental protection activities or projects.

### **Article 18:**

The system of incentives mentioned in the preceding Article shall be submitted to the Board of Directors of EEAA and approved by the Prime Minister.

## **PART ONE PROTECTION OF LAND ENVIRONMENT FROM POLLUTION**

### **CHAPTER ONE DEVELOPMENT AND ENVIRONMENT**

### **Article 19:**

The competent administrative authority or the licensing authority shall assess the environmental impact of the establishment for which a license is sought by reference to the elements, designs, specifications and criteria issued by the EEAA in agreement with the competent administrative authorities. The executive regulations of the Law shall determine the establishments to which the provisions of this article apply.

### **Article 20:**

The competent administrative authorities or the licensing authority shall send a copy of the environmental impact assessment mentioned in the preceding Article to the EEAA, to express its opinion thereon and propose measures required to be taken in the field of preparations and systems in order to treat negative environmental effects. The said authorities shall verify the implementation of the EEAA's proposals. The EEAA is required to furnish the competent administrative authority or the licensing authority with its opinion on the assessment within a maximum of 60 days from receiving same, otherwise the assessment shall be deemed to have been accepted by the EEAA.

**Article 21:**

The competent administrative authority shall notify the owner of the establishment of the result of the assessment by a registered letter with return receipt requested. The owner of the establishment may object to the result in writing within thirty days of notification before a committee to be formed by a decree of the Minister in charge of Environmental Affairs. The EEAA, the competent administrative authority or the licensing authority and the owner of the establishment shall be represented on the committee. The executive regulations shall determine the functions of the committee as well as its operating and complaint procedures.

**Article 22:**

Pursuant to the provisions of this Law, the owner of an establishment shall keep a written register to record the impact of his establishment activities on the environment. The executive regulations will determine the standard form of the required register, the time frame of the establishment obligation to keep it and the data to be entered therein. The EEAA is authorized to follow up entries in the register to ensure that they conform to the facts, to take samples as required and to conduct appropriate tests to determine the impact of the establishment activities on the environment and the extent of its compliance with the criteria laid down for the protection of the environment. In case of any violation, the EEAA shall notify the competent administrative authority to direct the owner of the establishment to rectify such violation forthwith. If the owner fails to comply within 60 days, the EEAA shall be entitled, in agreement with the competent administrative authority, to take such legal and judicial procedures as are necessary to stop the offending activity and claim adequate damages to redress the harm resulting from the violation.

**Article 23:**

Expansions and renovations of existing establishments shall be subject to the same provisions set forth in Articles 19, 20, 21 and 22 of this Law.

**Article 24:**

Environmental monitoring networks with their stations and working units shall be formed, pursuant to the provisions of this Law, and shall undertake, in their respective fields of specialization, to monitor the components and pollutants of the environment on a regular basis and make the results available to the authorities concerned. For the fulfillment of the foregoing, the networks may call on the assistance of research centres and competent authorities which shall furnish the networks with the studies and information they request. The Agency shall supervise the establishment and operation of the environmental monitoring networks.

### **Article 25:**

The Agency shall lay down a contingency plan to deal with environmental disasters which shall be approved by the Cabinet. The contingency plan will be based in particular on the following:

- Gathering the information available at the national and international levels on ways of confronting environmental disasters and mitigating their harmful effects.
- Identifying the resources available at the national, regional and international levels and determining how they can be deployed to ensure a swift response to the disaster.

The contingency plan will include the following:

- Identifying the types of environmental disasters and the agencies responsible for reporting or predicting their occurrence.
- Establishing a central operations room to receive reports of environmental disasters and follow up the transmission of accurate information thereon in order to mobilize the necessary resources to deal with such disasters.
- Forming a task force to follow up the measures taken to confront an actual or predicted environmental disaster. The leader of the task force shall be vested with all the powers necessary to confront the disaster in cooperation and coordination with the competent authorities.

### **Article 26:**

All public and private bodies and all individuals are held to provide prompt assistance and support, upon request, in order to confront the environmental disaster. The fund referred to in article 14 of this law shall reimburse private bodies and individuals for the actual expenses incurred.

### **Article 27:**

An area of not less than one thousand square meters of state-owned land shall be allocated for the establishment of an arboretum for the cultivation of trees in each district and in each village. The output of these arboreta shall be available to agencies and individuals at cost price.

The competent administrative authorities to which these arboreta are affiliated shall lay down guidelines for the cultivation and protection of these trees. The EEAA shall participate in financing the establishment of these arboreta.

**Article 28:**

It is forbidden to hunt, kill, or catch the species of wild birds and animals determined in the executive regulations of this Law or to possess, transport, circulate with, sell or offer to sell such birds and animals either dead or alive. It is also forbidden to damage the nests or eggs of these birds.

The executive regulations of this Law shall determine the areas to which the provisions of this article apply and shall specify the conditions for a hunting license in these areas as well as the competent administrative authorities responsible for implementing the provisions of this article.

**CHAPTER TWO**

**HAZARDOUS MATERIALS AND WASTE**

**Article 29:**

It is forbidden to displace hazardous substances and waste without a license from the competent administrative authority. The executive regulations of this Law shall determine the procedures and conditions for granting such a license and the authority competent to issue same.

The ministers shall, each in his field of competence, issue in coordination with the Minister of Health and EEAA a table of the hazardous substances and waste referred to in para one of this article.

**Article 30:**

Management of hazardous waste shall be subject to the rules and procedures laid down in the executive regulations of this Law. The executive regulations shall designate the competent authority, which, after consulting EEAA, will issue the table of hazardous waste to which the provisions of this Law shall apply.

**Article 31:**

It is forbidden to construct any establishment for the treatment of hazardous waste without a license issued by the competent administrative authority after consulting the EEAA. Disposal of hazardous waste shall be in accordance with the conditions and criteria set forth in the executive regulations of this Law. The Minister of Housing shall, after consulting with the Ministries of Health and Industry and the EEAA, designate the disposal sites and determine the conditions of the license to dispose of hazardous waste.

**Article 32:**

It is forbidden to import hazardous waste or to allow its introduction into or its passage through Egyptian territories. It is forbidden without a permit from the

competent authority to allow the passage of ships carrying hazardous waste in territorial seas or in the exclusive maritime economic zone of the ARE.

**Article 33:**

Those engaged in the production or circulation of hazardous materials, either in gas, liquid or solid form, are held to take all precautions to ensure that no environmental damage shall occur

The owner of an establishment whose activities produce hazardous waste pursuant to the provisions of this Law shall be held to keep a register of such waste indicating the method of disposing thereof, and the agencies contracted with to receive the hazardous waste. The executive regulations shall determine the data to be recorded in the said register and the EEAA shall be responsible for following up the register to ensure its conformity with the facts.

## **PART TWO**

### **PROTECTION OF AIR ENVIRONMENT FROM POLLUTION**

**Article 34:**

The site on which a project is established must be suitable for the project activity to ensure that the permissible levels of air pollutants are not overstepped, and that the total pollution emitted by all the establishments in one area is within the permissible levels.

The executive regulations of this Law shall determine the establishments subject to its provisions, the authority competent to approve the site and the permissible levels of air pollutants and noise in the area where the establishment is constructed.

**Article 35:**

In carrying out their activities, establishments subject to the provisions of this Law are held to ensure that emissions or leakages of air pollutants do not exceed the maximum levels permitted by laws and decrees in force and determined in the executive regulations of this Law.

**Article 36:**

It is prohibited to use machines, engines or vehicles whose exhaust emissions exceed the limits set by the executive regulations of this Law.

**Article 37:**

It is prohibited to throw, treat or burn garbage and solid waste except in special sites designated for such purpose which are far from residential, industrial or agricultural areas as well as from water-ways. The executive regulations of this Law shall determine the specifications and conditions of such sites and their minimum distance from the areas referred to hereinabove.

Local units shall, in agreement with the EEAA, designate the sites for burning, throwing or treating garbage and solid waste according to the provisions of this article.

**Article 38:**

It is prohibited to spray or use pesticides or any other chemical compound for agriculture, public health or other purpose except after observing the conditions, regulations and safety measures laid down in the executive regulations of this Law and in a manner that will not expose humans, animals, plants, waterways and other components of the environment, directly or indirectly, now or in future, to the harmful effects of such pesticides or chemical compounds.

**Article 39:**

All organizations and individuals shall be held, when carrying out exploration, excavation, construction or demolition works or when transporting the resultant waste or debris, to take the necessary precautions to secure the safe storage or transportation thereof to prevent loose particles from escaping into the air, in accordance with the provisions of the executive regulations.

**Article 40:**

It is mandatory when burning any type of fuel or otherwise, whether for industrial, energy production, construction or other commercial purpose, that the harmful smoke, gases, and vapors resulting from the combustion process are within the permissible limits. The person responsible for such activity shall be held to take all precautions necessary to minimize the pollutants in the combustion products. The executive regulations of this Law shall define such precautions as well as the permissible limits and the specifications of chimneys and other means of controlling the emission of the smoke, gases, and vapors resulting from the combustion process.

**Article 41:**

All organizations undertaking activities in the field of exploration, drilling, extraction and production of crude oil, its refining and processing shall observe the regulations and procedures set forth in the Law and its executive regulations which are derived from principles governing the international petroleum industry as provided by the competent administrative authority.



**Article 42:**

All organizations and individuals shall be held, when carrying out production, service or other activities, particularly when operating machinery and equipment or using sirens and loudspeakers, to keep the volume below the permissible sound intensity level.

Licensing authorities shall ensure that the total sounds emanating from fixed sources in one area shall be within the permissible levels, and ascertain that the establishments select the appropriate machinery and equipment to guarantee this. The executive regulations of this Law shall define the permissible levels of sound intensity and the permissible time limits for exposure thereto.

**Article 43:**

The owner of an establishment is held to take all precautions and procedures necessary to prevent the leakage or emission of air pollutants inside the work premises except within the permissible limits as defined by the executive regulations of this Law, whether they result from the nature of the establishment activities or from malfunctioning equipment. He has to provide the necessary protective measures for workers in accordance with the conditions of occupational safety and health, including choosing the appropriate machinery, equipment, material and fuel, taking into account the period of exposure to these pollutants. He must also ensure adequate ventilation and install chimneys and other air purification devices.

**Article 44:**

The owner of an establishment shall take the necessary procedures to maintain temperature and humidity inside the work-place within the permissible limits. In cases where it is necessary to work beyond these limits, he shall be held to secure appropriate protective measures for the workers, whether by providing them with special clothing or otherwise. The executive regulations of this Law shall set the maximum and minimum limits of temperature and humidity and the duration of exposure thereto as well as the protective measures.

**Article 45:**

Closed and semi-closed public places must have adequate ventilation facilities consistent with the size of the place and its assimilative capacity as well as with the type of activity exercised therein to ensure renewal and purity of the air and maintain it at a suitable temperature.

**Article 46:**

The director in charge of the establishment must take adequate measures to prevent smoking in closed public places except within the permissible limits specified in the license issued for such establishments. In such case, a special area shall be reserved for smokers in such a way as not to affect the air in other areas.

Smoking is prohibited in means of public transport.

**Article 47:**

The level of radioactivity or concentration of radioactive substances in the air shall not exceed the permissible limits as determined by the competent authorities in accordance with the executive regulations of this Law.

**PART THREE  
PROTECTION OF WATER ENVIRONMENT  
FROM POLLUTION**

**CHAPTER ONE  
POLLUTION FROM SHIPS**

**Section One  
Oil Pollution**

**Article 48:**

The aim of protecting the water environment from pollution is to achieve the following objectives:

- a. To protect the coasts and ports of the Arab Republic of Egypt from the risks of pollution in all its forms and shapes.
- b- To protect the environment of the territorial sea and the exclusive economic zone and their living or non-living natural resources by preventing, controlling and reducing pollution from any source.

- c- To protect the natural resources in the economic zone and the continental shelf.
- d- To compensate any natural or juridical person for any injury they sustain from the pollution of the water environment.

The Minister for Environmental Affairs in conjunction with the Minister of Maritime Transport and the competent administrative authorities referred to in para (38) of article (1) of this Law shall undertake to fulfill the aforesaid objectives, each within their respective fields of competence.

**Article 49:**

Ships of any nationality are forbidden to discharge oil or oily mixtures in the territorial sea or the exclusive economic zone of the Arab Republic of Egypt.

Military ships or support naval vessels of the Arab Republic of Egypt and other ships owned or operated by the state or by public authorities which are used in non-commercial governmental service and which are not subject to the provisions of the Convention shall take all necessary precautions to prevent pollution of the territorial sea or the exclusive economic zone of the Arab Republic of Egypt.

**Article 50:**

Ships registered in the Arab Republic of Egypt are forbidden to discharge oily or oil mixtures into the sea, in accordance with the Convention and international agreements to which the Arab Republic of Egypt adheres.

**Article 51:**

Foreign oil tankers calling at Egyptian ports must comply with all the requirements of Rule 13 of Annex 1 of the Convention as amended.

Oil tankers used in short voyages are exempt from these requirements pursuant to Rule 13c of the Convention as amended, as are oil tankers navigating the Suez Canal which are not obliged to discharge unclean ballast water.

**Article 52:**

National and foreign companies and organizations licensed to explore, extract or exploit off-shore oil fields and other marine natural resources, including oil transport facilities, are forbidden to discharge any polluting substances resulting from drilling, exploration, testing of wells or production in the territorial sea or the exclusive economic zone of the Arab Republic or Egypt. They are held to use safe measures not liable to harm the water environment and to treat any discharged waste or polluting substance according to the available technical methods and in accordance with the regulations of international conventions.

**Article 53:**

Without prejudice to the provisions of Law 79 of 1961 concerning marine disasters and shipwrecks, representatives of the competent administrative authority or judicial officers vested with the power to effect seizures shall be entitled to order the captain or the person in charge of the ship to take appropriate protection measures against the effects of pollution in the event of an accident involving a ship carrying an oil cargo which may pollute the territorial sea or the exclusive economic zone of the Arab Republic of Egypt.

**Article 54:**

The penalties prescribed in this Law shall not apply to cases of pollution resulting from:

- a- Securing the safety of a ship or the lives of those on board.
- b- Discharge resulting from damage to a ship or its equipment, provided such damage was not caused by the master or the person in charge to disable or destroy the ship or as a result of negligence. In all cases, the master of the ship or the person in charge thereof must have taken before and after the occurrence of damage all necessary precautions to prevent or reduce the effects of pollution and must have immediately notified the competent administrative authority.
- c- A sudden break in the pipeline carrying oil or oily mixtures during the operating, drilling, exploring or testing of oil wells, without any negligence in supervising or maintaining the pipelines, provided sufficient precautions to supervise the operation of the pipeline and immediate measures to control the pollution and its sources have been taken.

This shall be without prejudice to the right of the competent authority to recover the costs of removing the effects of pollution from the party responsible therefor and to claim damages for losses incurred and injuries sustained by reason of such pollution.

**Article 55:**

The owner of the ship, its master or any person responsible therefor and those responsible for means of oil transport within the port areas or the territorial sea or the exclusive economic zone of the ARE and the companies working in the field of oil extraction are held to notify the competent administrative authorities of any oil spill immediately on its occurrence, with a description of the circumstances of the accident, the type of oil involved and the measures taken to stop or reduce the spill and such other information as determined in the Convention and the executive regulations of this Law.

In all cases, the competent administrative authorities are held to notify the EEAA of all particulars concerning the incident promptly on its occurrence.

**Article 56:**

All loading ports, ports equipped to receive oil tankers and all dockyards must be fitted out with the necessary equipment to receive unclean ballast water and the bilge water from cleaning the tanks of oil tankers and other ships.

Ports must be equipped with enough barges and containers to receive the deposits, residues, and waste of oil and oily mixtures from ships docked in port.

No ship or tanker may be licensed to carry out loading and unloading works except after referring to the competent administrative authority which will receive and direct it to the locations for the disposal of waste and unclean ballast water.

**Article 57:**

The competent minister shall determine the tools and equipment for reducing pollution with which all ships registered in ARE or off-shore platforms installed in the water environment must be fitted out.

Foreign ships calling at Egyptian ports or passing through their littoral zones must be fitted out with pollution reducing equipment in accordance with the provisions of the Convention and its annexes.

**Article 58:**

Owners or masters of ships registered in the ARE as well as of ships pertaining to the states adhering to the Convention are held to keep a register of the oil on board in which shall be entered all operations relating to oil in the manner determined in the Convention, and in particular the following operations:

- a- Loading, delivery or other oil cargo transport operations, while designating the type of oil.
- b- Discharge of oil or oily mixture to secure the safety of the ship or its cargo or to save lives, while designating the type of oil.
- c- Oil or oily mixture spills as a result of a collision or accident, while indicating the size of the spill.
- d- Discharge of unclean ballast water or of bilge water from cleaning the tanks.
- e. Disposal of polluting waste.
- f. Discharge of machinery space bilges, containing the oil collected within the machinery space, outside the ship while in port.

The executive regulations shall determine the means of recording the processes of discharging oil or oily mixture, in respect of off-shore platforms installed in the water environment.

**Article 59:**

Without prejudice to the provisions of the International Convention on Civil Liability for Injuries Resulting from Oil Pollution Accidents signed in Brussels in 1969 as amended, all oil tankers whose total tonnage amounts to 2,000 tons or more and which are registered in ARE, and other oil transport equipment whose total tonnage amounts to 150 tons or more operating in the territorial sea or the exclusive economic zone of ARE, are held to present a financial guarantee certificate in the form of insurance or indemnity bond or any other form of guarantee to the competent administrative authority in accordance with the guidelines laid down in a decree from the Minister of Maritime Transport in agreement with the Minister of Petroleum and the Minister for Environmental Affairs.

The guarantee certificate must be presented when the tanker enters the territorial sea and shall be valid and cover all damages and compensation as assessed by the competent administrative authority.

With regard to ships registered in a country adhering to the International Convention on Civil Liability for Injuries Resulting from Oil Pollution Accidents, such certificate shall be issued from the competent authority in the country where the ship is registered.

**Section Two**

**Pollution By Harmful Substances**

**Article 60:**

It is prohibited for tankers carrying harmful liquid substances to discharge any harmful substances, waste or deposits intentionally or unintentionally, directly or indirectly, resulting in harm to the water environment or public health or to other legitimate uses of the sea. It is also prohibited for ships carrying harmful substances in receptacles, cisterns portable tanks or land or railroad containers to dispose of such substances in the territorial sea or in the exclusive economic zone of ARE.

It is prohibited to throw dead animals in the territorial sea or the exclusive economic zone of ARE.

**Article 61:**

All loading and unloading ports equipped to receive the tankers referred to in the first paragraph of the previous article, as well as all dockyards, shall be fitted out with adequate facilities to receive the harmful liquid substances and their wastes.

**Article 62:**

Tankers carrying harmful liquid substances must be provided with a cargo register pursuant to the Convention, in which the master of the ship or the person responsible for it shall record all operations as stated in the Convention.

**Article 63:**

Representatives of the competent administrative authority and the judicial officers vested with the power to effect seizures shall have the authority to order the ship's master or the person responsible for it to take the necessary measures to reduce the effects of pollution in the event of an accident to any ship carrying harmful substances that may pollute the territorial sea or the exclusive economic zone of the ARE in any way. Ships carrying harmful substances are forbidden to dump polluting substances and waste in the continental shelf or the exclusive economic zone of ARE.

**Article 64:**

The provisions of Article 54 of this Law shall apply to cases of pollution resulting from measures taken to save lives on board or to save the ship itself from harm.

**Article 65:**

The ship's master or the responsible person is held to implement all the conditions stated in Rule 8 of Annex 2 of the Convention.

**Section Three**

**Pollution from Sewage and Garbage**

**Article 66:**

Ships and off-shore platforms are prohibited from discharging their polluted waste-water in the territorial sea or the exclusive economic zone of the ARE. It must be disposed of according to the criteria and procedures laid down in the executive regulations of this Law.

**Article 67:**

All ships and off-shore platforms working in the field of exploration and exploitation of natural and mineral resources in the water environment of the ARE as well as ships calling at Egyptian ports, are forbidden to dispose of their garbage in the territorial sea or in the exclusive economic zone. Ships are held to deliver garbage to the reception facilities or to places designated by the competent administrative authority for fees to be fixed by a decree of the competent Minister.

**Article 68:**

All loading and unloading ports, all ports equipped to receive ships and all stable or floating dockyards must be fitted out with the necessary and adequate facilities to receive polluted waste water and garbage from ships.

**CHAPTER TWO  
POLLUTION FROM LAND BASED SOURCES**

**Article 69:**

It is prohibited for all establishments, including public places and commercial, industrial, touristic and service establishments, to discharge or throw any untreated substances, wastes or liquids which may cause pollution along the Egyptian sea shores or adjoining waters either directly or indirectly, intentionally or unintentionally. Each day of such prohibited discharge shall be considered as a separate violation.

**Article 70:**

No building permits shall be granted for establishments or public places on or near the sea shore, which would result in the discharge of polluting substances in violation of the provisions of this Law and the decrees issued in implementation thereof unless the applicant for such permit conducts environmental impact studies and undertakes to provide waste treatment units and to operate them as soon as the establishment commences work.

**Article 71:**

The executive regulations of this Law shall define the specifications and criteria which must be observed by industrial establishments allowed to discharge degradable polluted substances after they have been treated. The administrative authority, specified in the said executive regulations, shall conduct periodic analysis of samples of the treated liquid waste in its laboratories and notify the competent administrative authorities of the results. In case of violations, the party concerned shall be granted a grace period of one month to treat the waste and render it compatible with the said specifications and standards. If treatment is not completed within the grace period as aforesaid or if the tests carried out during such period prove that continued



discharge would result in severe harm to the water environment, discharge shall be halted by administrative means and the establishment license shall be revoked without prejudice to the penalties prescribed in this Law. In addition, the executive regulations shall specify the non-degradable polluting substances which industrial establishments are prohibited from discharging in the water environment.

**Article 72:**

Without prejudice to the provisions of article 96 of this Law, representatives of the juridical persons or managers of the establishments mentioned in article 69 which discharge in the water environment shall be responsible for any acts carried out by their employees in violation of the provisions of the said article as well as for providing means of treatment in accordance with the criteria and specifications laid down in the executive regulations and shall be liable to the penalties prescribed in Article 87 of this Law.

**Article 73:**

It is prohibited to construct any establishment within 200 meters of the Egyptian coast lines without the permission of the competent administrative authority in coordination with the EEAA. The executive regulations of this Law shall lay down the procedures and conditions to be followed in this connection.

**Article 74:**

It is prohibited to take any measures that may affect the natural coast line or alter its configuration either inwards or outwards, without the approval of the competent authority in coordination with EEAA. The executive regulations of this law shall regulate the procedures and conditions to be followed in this connection.

**Article 75:**

The representatives of the concerned administrative authorities shall be entitled, each within its scope of competence and in coordination with the EEAA, to enter the exclusion zones referred to in articles 73 and 74 of this Law in order to inspect works being carried out therein. If they discover that works contrary to the foregoing provisions are being executed or are intended to be executed, the violator shall be ordered to restore matters to their original state otherwise the works will be halted administratively and matters restored to their original state at the expense of the violator and the beneficiary jointly. Payment shall be collected by means of administrative attachment.

**CHAPTER THREE**

## INTERNATIONAL CERTIFICATES

### **Article 76:**

Egyptian ships are held to obtain from the Ports and Lighthouse Department the international oil pollution prevention certificate or the international certificate for the prevention of pollution resulting from cargoes of harmful liquid substances in bulk. The issuance of the said certificates shall be in accordance with the provisions and conditions set forth in the Convention and the validity of the certificate shall not exceed five years from the date of its issuance.

### **Article 77:**

All ships regularly carrying oil to or from Egyptian ports or from other oil transportation means within the territorial sea or the exclusive economic zone of ARE and which fly the flag of a state that is a signatory of the Convention must carry the international oil pollution prevention certificate which should be valid according to the Convention.

With regard to ships subject to the provisions of para 1 of this Article and flying the flag of a state that does not adhere to the Convention, the Minister of Maritime Transport shall determine the oil pollution prevention certificate that will be granted by the Ports and Lighthouse Department before licensing such ships to carry oil on a regular basis from an Egyptian port or from one of the means of oil transport within the exclusive economic zone.

## CHAPTER FOUR

### ADMINISTRATIVE AND JUDICIAL PROCEDURES

### **Article 78:**

Representatives of competent administrative authorities and consular officials abroad shall be deemed judicial law officers vested with the power to effect seizures in respect of the application of the provisions of Part Three of this Law. The Minister of Justice in agreement with the competent ministers can vest other officials with this capacity according to the needs for implementing this Law and in compliance with the rules of International Law.

### **Article 79:**

The judicial officers referred to in the preceding article are authorized in case of violation, and if the ship's master or the person responsible therefor wishes to leave the port immediately, to collect sums of money on a temporary basis pending settlement of the fines imposed and the damages awarded pursuant to the provisions of Part Four of this Law, provided the amount so collected shall

not be less than the minimum prescribed for the violation in addition to all expenses and damages determined by the competent administrative authority to remove the effects of the violation.

A financial guarantee covering the value of these amounts and accepted by the competent administrative authority may be presented, without prejudice to the provisions of the International Convention on Civil Liability for Oil Pollution signed in Brussels in 1969.

### **Article 80:**

Without prejudice to the provisions of the Code of Criminal Procedure, the officers referred to in article 78 shall be entitled to board ships and off-shore platforms, and to enter establishments built on the shore and inspect the means used to transport oil and marine polluting substances to ensure compliance with the provisions of this Law and the decrees issued in implementation thereof as well as the availability of waste treatment equipment.

The competent administrative authority shall issue its decision on what it regards as necessary for the protection of the marine environment in the light of the results of this procedure. The party concerned can object to this decision before the appeals committee mentioned in article 81 of this Law within fifteen days from the date of his notification thereof. Such objection shall not result in suspending implementation of the decision unless the said committee issues a decision to suspend its implementation until the settlement of the dispute.

### **Article 81:**

The minister concerned, as designated by the executive regulations of this Law shall issue a decree for the formation of the appeals committee. The committee shall be located within the working area of the port or in a nearby administrative authority and shall consist of the following members:

- A counselor from the State Council - Chairman.
- Representative of EEAA.
- Representative of the Ports and Lighthouses Department
- Representative of the Ministry of Defense.
- Representative of the Ministry of Petroleum and Mineral Wealth.
- Representative of the competent administrative authority within the scope of whose activities the violation occurred.

The committee may solicit the advice of one or more experts in the field of water environment. The function of this committee shall be to settle administrative disputes arising from the implementation of the provisions of Part Three of this Law. The committee shall issue its decision, after hearing both parties, by a majority decision of members present and in case of a tie, the chairman shall have the casting vote. The parties concerned may challenge the committee's decision before the Administrative Court of the State Council.

**Article 82:**

Every master or user of a ship calling at the Egyptian ports or licensed to operate in the territorial sea or the exclusive economic zone of ARE should provide the representatives of the competent administrative authority or the judicial officers responsible for implementing the provisions of this Law with the facilities required to perform their functions.

**Article 83:**

The competent administrative authorities may request assistance from the ministries of defense, interior, petroleum, and mineral resources, as well as from the Suez Canal Authority or any other competent agency, in implementing the provisions of Part Three of this Law according to the conditions laid down in the decree of the competent Minister.

**PART FOUR**

**PENALTIES**

**Article 84:**

Whoever violates the provisions of Article 28 of this Law shall be fined a sum of not less than two hundred Egyptian pounds and not more than five thousand Egyptian pounds. In addition, birds and animals seized as well as the machines and equipment used in the violation shall be confiscated.

**Article 85:**

Whoever violates the provisions of Articles 30, 31 and 33 of this Law shall be imprisoned for a period of not less than one year and/or fined ten thousand to twenty thousand Egyptian Pounds.

**Article 86:**

Whoever violates the provisions of article 36 of this Law shall be fined a sum of not less than two hundred Egyptian Pounds and not more than three hundred Egyptian Pounds. As to violations of the provisions of article 39 of this Law, these shall be punishable by a fine of not less than five hundred Egyptian Pounds and not more than one thousand Egyptian Pounds. The court may order the suspension of the license for a period of not less than one week and

not more than six months, and in case of recidivism, the court may revoke the license.

**Article 87:**

Whoever violates the provisions of article 42 of this Law by using loudspeakers with a volume exceeding the permissible levels of sound intensity shall be punished by a fine of not less than one hundred Egyptian Pounds and not more than five hundred Egyptian Pounds and the machines and equipment used in the violation shall be confiscated. Violators of the provisions of articles 38, 41, 69, and 70 of this Law shall be punished by a fine of not less than two hundred Egyptian Pounds and not more than twenty thousand Egyptian Pounds.

The fines imposed on those who violate the provisions of articles 35, 37, 40, 43, 44, or 45 of this Law shall be not less than one thousand Egyptian Pounds and not more than twenty thousand Egyptian Pounds. The same fine shall apply in respect of the non-compliance of the manager in charge of the establishment with the requirement to ban smoking in closed public places in violation of the provisions of para 1 of article 46 of this Law.

Anyone who smokes while using public transportation in violation of the provisions of para 2 of the said article shall be fined a sum of not less than ten Egyptian Pounds and not more than fifty Egyptian Pounds.

In case of recidivism, the penalty shall be imprisonment and the fine provided for in the preceding paragraphs.

**Article 88:**

Any person who violates the provisions of articles 29, 32, and 47 of the present Law shall be punished by imprisonment for a term of not less than five years and a fine of twenty thousand Egyptian Pounds to forty thousand Egyptian Pounds. Whoever violates the provisions of Article 32 shall be held to re-export the hazardous wastes subject of the crime at his own expense.

**Article 89:**

Any person who violates the provisions of article 2, the last paragraph of article 3, or articles 4, 5, and 7 of Law No. 48 of 1982 concerning the protection of the River Nile and waterways from pollution, and of the decrees issued in implementation thereof shall be fined a sum of not less than two hundred Egyptian Pounds and not more than twenty thousand Egyptian Pounds.

In case of recidivism, the penalty shall be both imprisonment and the fine provided for in the previous paragraph.

In all cases, the violator shall be held to remove or rectify the violating works by the date determined by the Ministry of Public Works and Water Resources. If the violating works are not removed or rectified by the due date, the Ministry of Public Works and Water Resources shall have the right to take procedures to

remove or rectify the violation by administrative means, at the expense of the violator, without prejudice to the right of the Ministry to revoke the license.

**Article 90:**

Whoever commits one of the following acts shall be fined a sum of not less than one hundred and fifty thousand Egyptian Pounds and not more than five hundred thousand Egyptian Pounds.

1. Discharges oil or oily mixtures or harmful substances in the territorial sea or the exclusive economic zone in violation of articles 49 and 60 of this Law.
2. Fails to comply with the requirement to treat the wastes and polluting substances discharged, or fails to use safe procedures which prevent damage to the water environment in violation of article 52 of this Law.
3. Discharges any other substance that pollutes the environment.

In case of recidivism, the penalty shall be both imprisonment and the fine provided for in the preceding paragraph.

In all cases, the violator shall be held to remove the effects of the violation within the time frame determined by the competent administrative authority, otherwise the administrative authority shall proceed with the removal at his expense.

**Article 91:**

A penalty of imprisonment and/or a fine of not less than one hundred and fifty thousand pounds and not more than five hundred thousand pounds shall be imposed on any one violating the provisions of article 54 hereof. Such party shall also be charged with the expenses of removing the effects of such violation as determined by the authorities commissioned to effect removal, if unloading, resulting from damage to the ship or its equipment, is carried out in order to delay or damage the ship or is due to negligence.

The fine shall be doubled in case of recidivism, and the executive regulations of the present Law shall lay down parameters for determining the value of the fine by reference to the extent of pollution and the environmental consequences arising from the violation of this article.

**Article 92:**

Whoever commits one of the following acts shall be fined a sum of not less than seventy thousand Egyptian Pounds and not more than three hundred thousand Egyptian Pounds:

1. Fails to fit out a foreign ship using Egyptian ports or navigating through the special marine area with pollution control equipment, in violation of article 57 of this Law.
2. Fails to take the necessary precautions to prevent or reduce the effects of pollution before and after the occurrence of damage to the ship or to its equipment or fails to promptly notify the competent administrative authority of the discharge resulting from damage to the ship or to its equipment in violation of the provisions of article 54-b of this Law.
3. Fails to promptly notify the competent administrative authority of any oil spill, the circumstances in which it occurred, the nature and percentage of the substance discharged and the measures taken, in violation of the provisions of article 55 of this Law.

The fine shall be doubled in case of recidivism in respect of item (1), while the repetition of the violations mentioned in items (2) and (3) shall be punished by imprisonment and/or a fine of not less than three hundred thousand Egyptian Pounds and not more than five hundred thousand Egyptian Pounds.

In all cases, the violator shall be held to remove the effects of the violation within the time frame determined by the competent administrative authority, otherwise the administrative authority shall proceed with their removal at the expense of the violator.

#### **Article 93:**

Whoever commits one of the following acts shall be fined a sum of not less than forty thousand Egyptian Pounds and not more than two hundred thousand Egyptian Pounds:

1. Loading and unloading works by ships or tankers without having a license from the competent administrative authority in violation of the provisions of article 56 of this Law.
2. Failure of the ship or the tanker to keep the certificates and registers stipulated in articles 58, 62, 76 and 77 of this Law.
3. Discharges polluted waste-water or throws garbage from ships in violation of the provisions of articles 66 and 67 of this Law.
4. Discharges oil or oily mixtures into the sea in violation of the provisions of article 50 of this Law by any ship registered in the Arab Republic of Egypt.

#### **Article 94:**

Whoever commits one of the following acts shall be fined a sum of not less than forty thousand Egyptian Pounds and not more than one hundred and fifty thousand Egyptian Pounds:

1. Fails to fit out the ships registered in ARE with the instruments and equipment necessary to reduce pollution in violation of the provisions of article 57 of this Law.
2. Contravenes the orders of the inspectors of the competent administrative authority or the judicial officers in case of an accident to a ship carrying oil or harmful substances pursuant to the provisions of articles 53 and 63 of this Law.

**Article 95:**

Whoever intentionally violates the provisions of this Law shall be punished by imprisonment for a term of not more than 10 years if such violation results in causing a permanent incurable disability to an individual. The penalty shall be imprisonment if the violation results in causing this infirmity to three or more persons.

If the violation results in the death of a person, the penalty shall be temporary hard labour, and if it results in the death of three persons or more the penalty shall be permanent hard labour.

**Article 96:**

The ship's master or the person responsible therefor and the parties to contracts for the exploration, extraction and exploitation of marine oil fields and other natural resources including oil transport facilities as well as the owners of the establishments mentioned in article 69 of this Law shall be jointly liable, each within his scope of competence, for any harm that befalls any natural or juridical person as a result of a violation of the provisions of this Law as well as for payment of imposed fines and the expenses of removing the effects of such violations.

**Article 97:**

The penalties stipulated in the previous articles shall be imposed on all ships of all nationalities and types including those belonging to states not bound by the Convention if they discharge oil or oily mixtures or commit prohibited dumping or submerging in the territorial sea or the exclusive economic zone of the ARE.

**Article 98:**

Penalties for violating the provisions of articles 73 and 74 of this Law shall be imprisonment for a period of not more than six months and/or a fine of not less than one thousand Egyptian Pounds and not more than twenty thousand Egyptian Pounds.



The court may not order a stay of execution of the fine, and in all cases, the violating works must be halted and removed by administrative means at the expense of the violator and the machinery, equipment and materials used in these works shall be seized without awaiting a court sentence. In case of conviction, such machinery and equipment shall be confiscated.

**Article 99:**

Jurisdiction over the crimes referred to in this Law shall lie with the court within the circumscription of which any such crime is committed, if it is committed by the ships referred to in article 97 within the territorial waters of the ARE or in the exclusive economic zone. The court shall rule on the case expeditiously.

Jurisdiction over the crimes committed outside the two areas mentioned in this article shall lie with the court within the circumscription of which the port in which the ship flying the Egyptian flag is registered.

**Article 100:**

Without prejudice to the provisions of Article 79, the competent administrative authority may take legal procedures to detain any ship which fails to pay the instant fines and/or in the summary cases stipulated in the said article.

Such detention shall be lifted if due payments are made or an unconditional financial guarantee accepted by the competent administrative authority is presented.

**Article 101:**

The imposition of the penalties stipulated in this Law shall be without prejudice to the imposition of any more severe penalty prescribed in another law.

**FINAL PROVISIONS**

**Article 102:**

Without prejudice to the provisions of article 78 of this Law, the employees of the EEAA and its branches in the governorates designated by a decree of the Minister of Justice in agreement with the Minister in charge of Environmental Affairs shall have the capacity of judicial officers vested with the power to effect seizures in proving the commission of crimes in violation of the provisions of this Law or the decrees issued in implementation thereof.

**Article 103:**

Every citizen and organization concerned with the protection of the environment shall have the right to report any violation of the provisions of this Law.

**Article 104:**

Inspectors of administrative authorities concerned as well as the inspectors of the Environmental Affairs Agency (EEAA) who have the capacity of judicial officers in matters relating to the environment shall be held, each in his field of competence, to report to the authority to which they belong any violation of the provisions of this Law and the authorities concerned shall then take the necessary legal procedures.

**EXECUTIVE REGULATION**

**OF**

**LAW NUMBER 4 of 1994**

**EGYPT**

# **PRIME MINISTER'S DECREE**

**Prime Minister's Decree No. 338 of 1995  
Issuing the Executive Regulations of the  
Environment Law promulgated by  
Law No. 4 of 1994<sup>(2)</sup>**

The Prime Minister,  
After reviewing Law No. 4 of 1994 promulgating  
the Environment Law, and  
The presentation made by the  
Minister of Environmental Affairs after  
consulting the Board of Directors of the  
Environmental Affairs Agency, and  
Pursuant to the opinion of the Council of State,

**Decrees:**

**Article 1:**

The provisions of the attached Executive Regulations of the Environment Law promulgated by Law No. 4 of 1994 shall come into force.

**Article 2:**

Without prejudice to the provisions of Article 1 of the aforementioned Law No. 4 of 1994, establishments wishing to extend the prescribed time limit for making the required adjustments are to submit their applications to the EEAA six months before the expiration of the three year period prescribed in the above-mentioned article. The applications shall include justifications for such an extension and the procedures taken for the implementation of the provisions of the attached Executive Regulations.

The EEAA shall be held to verify the submitted data and to ascertain how far the establishment is willing to implement the provisions of these Executive Regulations. The EEAA shall submit a detailed report, substantiated with documents, to the Minister for Environmental Affairs for presentation to the Cabinet.

The EEAA may, in preparing the report, resort to experts nominated for this purpose, in which case the applicant requesting the extension shall bear the costs estimated by the EEAA for these experts.

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<sup>2</sup> Official Gazette, *el-WakaE el-Masreya*, Issue No. 51, 28 February 1995.

**Article 3:**

This Decree shall be published in the Official Gazette *el-Wakaé el-Masreya* and shall come into force on the day following the date of publication.

Issued in the Cabinet on the 18th of Ramadan 1415 Hejra Year  
corresponding to the 18th of February 1995 A.D.

Prime Minister

Dr. Atef Sidki

**Executive Regulation**

**OF**

**LAW NUMBER 4 of 1994**

**EGYPT**

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**Executive Regulations of  
the Environment Law**

**PRELIMINARY PART**

**Chapter I  
General Provisions**

**Article (1)**

In the application of the provisions of these Executive Regulations, the following terms and expressions shall have the meanings hereby assigned to them:

**1. Water Polluting Substances:**

Any substance whose discharge into the water environment, intentionally or unintentionally, leads to a change in its properties, or contributes to such change directly or indirectly to an extent that can harm man, natural resources, sea water or marine tourist areas, or which interferes with other legitimate uses of the sea. These substances include:

- A- Oil or oily mixtures.
- B- Harmful and dangerous waste as determined in the international conventions to which the Arab Republic of Egypt adheres.
- C- Any other substances (solid-liquid-gas) designated in a decree issued by the Minister for Environmental Affairs.
- D- Untreated industrial waste or effluents from industrial establishments.
- E- Toxic military containers.
- F- Substances listed in the Convention and its annexes.

**2- Discharges:**

Any leakage, spillage, emission, drainage or disposal of any kind of polluting substances into the water of the territorial sea, the exclusive economic zone, the sea, the River Nile and the waterways, taking into consideration the levels determined for certain substances in Annex (1) of these Executive Regulations.

**3. Compensation:**

Means compensation for the damage resulting from pollution accidents in accordance with the application of the provisions of the Civil Code and the provisions of the International Convention on Civil Liability to which the Arab Republic of Egypt adheres or to which it will adhere in future, including the International Convention on Civil Liability for Damage resulting by Oil Pollution Accidents signed in Brussels in 1969, or from pollution accidents involving toxic or any other harmful substances as well as damage resulting from ships operated by nuclear power, from air pollution, from the pollution caused by the collision and keeling of ships or arising during their loading or unloading.

**4. The Coastline:**

The maximum extent on the land reached by sea water during the highest tide occurring within a period of not less than eleven years.

**5. Territorial Sea:**

It is the sea water extended seaward for 12 nautical miles from the coast of the Arab Republic of Egypt. It is measured from the baseline from which the width of territorial waters is measured in accordance with the provisions of the 1982 United Nations Convention on the Law of the Sea.

**6. Exclusive Economic Zone:**

The expanses of sea water extending beyond the territorial sea for a distance of two hundred nautical miles measured from the baseline.

**7. The Sea:**

The expanse of sea water lying beyond the Exclusive Economic Zone.

**8. The Private Sea Zone:**

Includes the Mediterranean and Red Sea areas according to the geographical and natural boundaries as determined in Rule (10) of Annex (1) of the (Maripool) Convention for 1973-1978.

## **Chapter II**

### **The Environmental Affairs Agency**

#### **Article (2)**

The Environmental Affairs Agency (EEAA) established by Law No. 4 of 1994 shall replace the agency established by Presidential Decree No. 631 of 1982 in all its rights and obligations, and the employees of the said agency shall be transferred with their grades and seniority to the EEAA and assigned in such capacity to the administrative sectors of the EEAA by a decree issued by its CEO.

#### **Article (3)**

The Board of Directors of the Environmental Affairs Agency shall be constituted pursuant to a decree issued by the Prime Minister. The Board shall be chaired by the Minister for Environmental Affairs and shall include the following members:

- \* The CEO of the Agency, who shall be the deputy chairman of the Board.
- \* At least one high-ranking representative, to be designated by the competent minister, from each of the following six ministries: Agriculture, Animal and Fish Resources and Agrarian Reform; Public Works and Water Resources; Transport and Communications; Industry; Interior and Health.
- \* Two experts in the field of environmental affairs selected by the Minister for Environmental Affairs on the basis of a proposal from the CEO of the Agency.
- \* Three non-governmental organizations concerned with the environment to be selected from among the candidates of these organizations to represent them on the Board of Directors, in agreement with the Minister for Environmental Affairs.
- \* A senior employee of the EEAA selected by the Minister for Environmental Affairs on the basis of a proposal by the CEO of the Agency.
- \* The director of the Legal Opinions Department concerned at the Council of State.
- \* Three representatives from among the candidates put forward by the public business sector selected by the Minister for Environmental Affairs, on the basis of the nomination of the CEO of the Agency.

- \* Two representatives from universities and scientific research centers selected by the Minister for Environmental Affairs from among the candidates put forward by the said bodies.

The representatives of the ministries concerned must be invited to attend Board meetings whenever subjects related to the sectors under their supervision are tabled for discussion. The Board may solicit the assistance of experts when considering specific issues, with no right for such experts to have a counted vote in the deliberations. The Board of Directors may form advisory committees of experts to study certain subjects and entrust one or more of the members of such committees with a specific task.

The secretariat of the Board of Directors shall be held by the Secretary General of the EEAA who shall not have a counted vote in the deliberations unless he was selected as a member of the Board of Directors. The Board of Directors shall be reconstituted every three years.

#### **Article (4)**

The EEAA Board of Directors is the supreme authority governing its affairs, running its business and drawing up the general policy it will follow. The Board may adopt whatever resolutions it deems necessary for the fulfillment of the objects for which the EEAA was established, within the framework of the national plan. It shall in particular have the authority to:

- \* Approve national plans for the protection of the environment.
- \* Approve contingency plans to deal with environmental disasters.
- \* Prepare draft laws concerning the environment.
- \* Approve experimental projects undertaken by the EEAA.
- \* Approve environmental training policies and plans.
- \* Approve the levels and ratios necessary to ensure the non pollution of the environment.
- \* Approve standards and procedures for assessing the environmental impact of projects.
- \* Supervise the Fund for the Protection and Development of the Environment.
- \* Approve the organizational structure of the EEAA and its branches in the governorates.
- \* Approve the by-laws and personnel regulations of the EEAA.
- \* Approve the EEAA draft annual budget.

- \* Consider all matters which the Chairman of the Board deems worthy to be presented to it and which lie within the EEAA scope of competence.
- \* Determine which of its resolutions should be submitted to the Cabinet for a decision. In all cases, the Board of Directors shall be held to include with its resolutions, particularly those it decides to submit to the Cabinet, a study on the costs of implementing such resolutions and the expected results ensued.

### **Article (5)**

The CEO of the Agency shall be responsible for implementing the general policy adopted to fulfill its objects and the resolutions of the Board of Directors. His responsibilities include:

- Exercising ministerial powers as prescribed in laws and regulations in respect of EEAA staff.
- Exercising ministerial powers as prescribed in various laws and regulations related to the management of the EEAA business, the running of its technical, financial and administrative affairs and the fulfillment of its objects.
- Exercising ministerial powers in the area of applying the provisions of Law No. 9 of 1983 promulgating the Law on Tenders and Auctions and its Executive Regulations.
- Developing the system of work in the EEAA, consolidating its departments and issuing the necessary resolutions to that end.
- Obtaining data and information related to the Agency objectives from various governmental and non-governmental bodies concerned both inside and outside the country.
- Ensuring the application of the provisions of the Environment Law and these Executive Regulations in agreement, coordination and cooperation with other legally competent establishments.

### **Article (6)**

The EEAA shall have an organizational structure issued by a decision from its CEO with the approval of the Board of Directors and in agreement with the Central Agency for Organization and Administration and the Ministry of Finance.

### **Chapter III**

#### **The Environment Protection Fund**

##### **Article (7)**

A special fund shall be established in the EEAA under the name "the Environment Protection Fund" to which shall devolve:

- a. Amounts allocated in the state budget to subsidize the fund.
- b. Grants and donations presented by national and foreign organizations for the purpose of protecting and promoting the environment and which are accepted by the Board of Directors of the EEAA.
- c. Fines levied and damages awarded or agreed upon for any harm caused to the environment.
- d. The financial resources of the Nature Reserves Fund provided for in Law 102 of 1983.
- e. The EEAA share in the 25% of the proceeds of duties imposed on travel tickets issued in Egypt in Egyptian currency, pursuant to Article 1 of Law 5 of 1986 and to the Prime Minister's Decree No. 697 of 1986, to a minimum of 12.5% of the total proceeds of the abovementioned duties.
- f. The returns from experimental projects undertaken by the EEAA.
- g. Amounts collected by the EEAA for services rendered to third parties.
- h. Fees for licenses issued by the EEAA.

Amounts collected on a temporary basis on account of fines and compensation for damage caused to the environment shall be deposited in the Fund and held in trust.

The Fund shall have a special balance sheet and its fiscal year shall commence and end with that of the state. Any surplus shall be carried over from one year to the next. The money in the Fund is deemed to be public money.

##### **Article (8)**

The resources of the Fund shall be allocated to the fulfillment of its objects, in particular to:

- \* Confronting environmental disasters.
- \* Experimental and pioneering projects in the field of protecting natural wealth and the environment from pollution.
- \* Transfer of low cost technologies whose application has proved to be successful.
- \* Financing the manufacture of model equipment, machinery and plants for the treatment of environmental pollutants.
- \* Establishing and operating Environmental Monitoring Networks.
- \* Establishing and administering Nature Reserves in order to preserve natural wealth and resources.
- \* Confronting pollution from unknown sources.
- \* Financing the studies required to prepare environmental programmes, assessing environmental impact and determining the standards and criteria that must be observed in order to protect the environment.
- \* Participating in financing environmental protection projects undertaken by local administrative agencies and grass-roots organizations which are partly financed through popular participation.
- \* Projects to combat pollution.
- \* Disbursing bonuses for outstanding achievements in the area of protecting the environment.
- \* Consolidating the EEAA basic structure and developing its activities.
- \* Other objects aimed at protecting and developing the environment which are approved by the EEAA Board of Directors.

#### **Chapter IV** **Incentives**

##### **Article (9)**

Within six months from the date these Executive Regulations come into force, the EEAA shall, in collaboration with the Ministry of Finance, lay down a system of incentives which the EEAA and competent administrative bodies may offer to agencies, establishments, individuals and others who undertake activities or projects that protect the environment, provided due consideration is given when laying down such system to the privileges and conditions prescribed in laws and



decrees, particularly to those related to investments, customs, industry, cooperatives and others.

## **PART ONE**

### **PROTECTING LAND ENVIRONMENT FROM POLLUTION**

#### **Chapter I**

#### **Development and the Environment**

##### **Article (10)**

The competent administrative body or the licensing authority shall assess the environmental impact of the establishment applying for a license in accordance with the elements, designs, specifications and conditions issued by the EEAA in agreement with the competent administrative body. The EEAA shall revise its assessment whenever necessary.

##### **Article (11)**

The provisions of Article (10) of these Executive Regulations shall apply to the establishments listed in Annex (2) of these Executive Regulations.

##### **Article (12)**

The applicant for a license shall be held to attach to the application a detailed description of the establishment containing the data included in the model form prepared by the EEAA in agreement with the competent administrative body. The EEAA shall prepare a register comprising copies of this model form and the assessment results, as well as the requests made by the EEAA to the owner of the establishment.

##### **Article (13)**

The EEAA may resort to any experts whose names are included in a list to be issued by the EEAA in accordance with the criteria set by the EEAA Board of Directors, in order to get their opinion on the assessment of the environmental impact of the establishment intended to be constructed and for which a license is being sought.

**Article (14)**

The competent administrative body shall notify the establishment owner of the assessment result by registered letter with return receipt requested. The owner is entitled to object to such result in writing within a period of thirty days from the date of his notification before the Permanent Review Committee to be formed by a decree of the Minister for Environmental Affairs. The said Committee shall be chaired by a counselor from the Council of State and shall include the following members:

- A representative from the EEAA nominated by its CEO.
- The owner of the or whoever represents him by virtue of an official power of attorney.
- A representative of the competent body or of the licensing authority when it is not the competent body.
- Three experts to be selected as members of the Committee for a term of three years on the basis of their nomination by the Agency CEO.

The Committee may form sub-committees from among its members and others to study the objections referred to them and present reports thereon to the Committee. In performing its tasks, the Committee may solicit assistance from any quarter at its discretion, and shall be held to issue its decision within sixty days from the date of receiving the completed objection documents.

**Article (15)**

The Permanent Review Committee referred to in Article (14) above shall be competent to look into the objections submitted or referred to it in connection with assessment results or with the proposals which the EEAA requires to be executed, and shall formulate its opinion on such objections by reference to the standards prescribed in Article (10) of these Executive Regulations. Objections shall be submitted in writing to the EEAA and shall include the reasons for the objection and the legal and scientific grounds on which the project owner substantiates his objection. The latter shall also attach thereto such documents as it deems necessary to support the reasons for his objection.

**Article (16)**

The Committee shall convene at the invitation of the Agency CEO within fifteen days from the date the Agency receives the written objection. A representative from the Agency, delegated by the CEO, shall take minutes of the meeting without having a counted vote in the discussions. The Committee decision shall be issued by a simple majority of votes, and the minutes shall be signed by all attending members.

**Article (17)**

The establishment owner shall, pursuant to the provisions of these Executive Regulations, keep a register indicating the environmental impact of the establishment activities in which the following data shall be recorded:

- Emissions put out thereby or discharged therefrom.
- Specifications of discharges after the treatment process, and the efficiency of the treatment units used.
- Follow-up and environmental safety procedures applied in the establishment.
- Periodical tests and measures and their results.
- The name of the person in charge of follow-up.

The said register shall be prepared in accordance with the model form shown in Annex (3) hereto.

The establishment owner or his representative shall be held to notify the EEAA immediately, by means of registered letter with return receipt requested, of any deviation in the criteria and specifications of emitted or discharged pollutants and the procedures taken to rectify such deviations.

**Article (18)**

The EEAA shall be competent to follow-up the data recorded in the register to ascertain its conformity with the facts, as well as to take the necessary samples and conduct the appropriate tests to determine the environmental impact of the establishment activity and the extent of its adherence to the criteria laid down for the protection of the environment.

Such follow-up shall be regularly conducted every year and a report thereon deposited with the competent department in the EEAA. The report shall be signed by the officer in charge of follow-up and tests and shall indicate the date on which the follow-up was conducted. If any violations are discovered, the EEAA shall notify the competent administrative body which shall instruct the establishment owner, by means of a registered letter with return receipt requested, to rectify such violations forthwith in accordance with the proper rules of trade. If he fails to do so within 60 days, the CEO, in co-ordination with the competent administrative body, shall be entitled to take the following procedures:

1. Close down the establishment.
2. Suspend the contravening activity.
3. Claim adequate compensation through the courts to remedy the damage resulting from the violation.

Establishments shall permanently keep the registers duly completed according to the model form referred to in Article (17) hereof, . When entries are updated, the establishment shall be held to maintain the register for a period of ten years calculated from the date of the EEAA representative's signature thereon attesting to its review.

#### **Article (19)**

Expansions or renovations of an existing establishment are subject to the same provisions prescribed in Articles (19), (20), (21) and (22) of the Environment Law.

Any change in the production patterns of the operating machines or increase in the size of the manpower beyond the capacity of the work place or any essential modifications to the establishment buildings, particularly those related to the ventilation system or the relocation of the work premises or other similar modifications which may have a harmful effect on the environment or on the employees of the establishment, are considered expansions and renovations.

#### **Article (20)**

The existing Environmental Monitoring Networks, including the stations, shall be considered as work units administratively subordinate to their competent bodies and shall, within the scope of their competence, undertake to periodically monitor environmental components and pollutants and furnish the relevant data to the bodies concerned. To that end, they may resort to the help of research centers and competent bodies and agencies which shall be held to provide the Networks with the requested data and studies. The EEAA shall supervise the establishment and operation of the Environmental Monitoring Networks preliminary to setting up a national programme for environmental monitoring.

#### **Article (21)**

The EEAA shall, in cooperation with ministries, governorates, general authorities and other bodies concerned, lay down an emergency plan to confront environmental disasters which shall be approved by the Cabinet. The plan shall be based in particular on the factors indicated in the following phases:

#### **(A) Phase prior to the occurrence of the disaster:**

- Determining the types of environmental disasters and the areas most affected by them and identifying the expected impact of each type.
- Collecting information available locally and internationally on how to deal with environmental disasters and on the means of alleviating the damage resulting therefrom.
- Compiling a list of the resources available at the local, national and international levels and determining the optimal manner in which they can be deployed to deal promptly with the disaster.
- Determining the bodies responsible for reporting actual or impending disasters.
- Laying down the procedures appropriate for each type of disaster.
- Establishing a central operations room to receive reports on environmental disasters and follow-up the receipt and dispatch of accurate information thereon to mobilize the necessary resources so as to confront such disasters.
- Supervising, training and following up disaster-management teams at all levels.
- Facilitating the system and means of exchanging information between the various bodies on matters relating to disasters, and ensuring the efficiency of the system.
- Determining the means of exchange of and requests for assistance between the various bodies when managing a crisis and establishing the appropriate data bases.

**(B) Phase when disaster is at its peak:**

- Forming a task group to follow-up the confrontation of the environmental disaster upon its occurrence.
- Implementing the plans set for coordination and cooperation at the local, regional and central levels to ensure the uninterrupted flow of equipment and supplies to the disaster area.
- Realizing the optimum utilization of actual resources available to various organizations in dealing with the disaster.
- Specifying what each organization needs from the other organizations in the light of the evolution of the disaster.
- Determining the means of informing citizens of the disaster, its evolution and the means of dealing with its effects.

**(C) Phase of removing the effects of the disaster**

- Determining the manner of participation by various organizations in removing the effects of the disaster.
- Developing plans aimed at enhancing performance.
- Raising public awareness of the means for dealing with disasters.

**(D) Phase of recording the results of the disaster and the lessons drawn therefrom:**

- Recording the economic and social effects resulting from the occurrence of the disaster.
- Recording the lessons drawn from dealing with each disaster.
- Advancing proposals for the avoidance in future of shortcomings and deficiencies discovered during the confrontation.

**Article (22)**

The operation room referred to in Article (21) of these Executive Regulations shall form a work group to confront an environmental disaster upon its occurrence or at the time it is expected to occur. The work group shall include representatives from the various bodies concerned, and its head shall have all the powers necessary to confront the environmental disaster, in cooperation with the competent bodies.

**Article (23)**

All methods of hunting, killing or catching the birds and wild animals referred to in Annex (4) of these Executive Regulations are prohibited. It is also forbidden to possess, transport, circulate with, sell or offer to sell such birds and animals, either dead or alive, or to destroy the nests or eggs of the birds. The provisions of this Article shall apply to all Nature Reserves as well as to areas where animals and birds are threatened with extinction, as designated in a decree to be issued by the Minister of Agricultural or the governors in coordination with the EEAA.

**Article (24)**

It is forbidden to issue licenses for the hunting of the birds and wild animals referred to in Annex (4) hereof except for purposes of scientific research, overcoming an epidemic or for such other purposes as are approved by the EEAA. The application for a license shall be submitted in writing to the Ministry of Interior, indicating the species and number of birds or wild animals for which the hunting license is required, the purpose for which they will be hunted, the hunting period, the names of the person or persons to be licensed, and the method and weapons to be used in hunting. The said Ministry shall refer the application to the EEAA in order to ascertain its seriousness and importance.

**Chapter II****Hazardous Substances and Waste****Article (25)**

It is forbidden to displace and use hazardous substances and waste without a license from the competent authority indicated for each as hereinbelow:

1. Hazardous agricultural substances and waste, including pesticides and fertilizers - Ministry of Agriculture.
2. Hazardous industrial substances and waste - Ministry of Industry.
3. Hazardous pharmaceutical, hospital and laboratory substances and waste and domestic insecticides - Ministry of Health.
4. Hazardous petroleum substances and waste - Ministry of Petroleum.
5. Hazardous substances and waste from which ionizing radiation is emitted - Ministry of Electricity - Nuclear Energy Authority.
6. Hazardous inflammable and explosive substances and waste - Ministry of Interior.
7. In respect of other hazardous substances and waste, the respective bodies competent to issue a license for their displacement shall be designated by a decree of the Minister for Environmental Affairs on the basis of a proposal by the CEO of the EEAS

The ministers heading the ministries mentioned in this Article shall, each within his scope of competence and in coordination with the Minister of Health and the EEAA, issue a table of hazardous substances and waste specifying:

- A. The types of hazardous substances and waste falling within his ministry scope of competence and their respective degrees of danger.

- B. The constraints to be observed in the displacement of each.
- C. The means of disposing of the empty containers of such substances after their displacement.
- D. Any other constraints or conditions the minister deems important to add.

### **Article (26)**

The applicant for a license shall submit his application in writing to the competent authority as defined in Article (25) of these Executive Regulations in accordance with the following procedures and conditions:

#### **Procedures for granting a license:**

The license to handle hazardous substances and waste shall have a maximum validity period of five years unless an event entailing its review occurs. The competent administrative authority may, pursuant to the provisions of Article (40) hereof, grant temporary licenses for short periods as necessity dictates.

The body or individual wishing to obtain a license for the displacement of hazardous substances or waste shall submit an application containing the following data:

- 1- Handler of hazardous substances and waste:
  - Name of establishment
  - Address and telephone No.
  - Site and area of establishment
  - Contour maps of the site
  - Level of underground water
  - Safety equipment in the establishment
  - Information concerning insurance
  - Programme for monitoring the environment in the area surrounding the establishment
- 2- Producer of hazardous substances and waste (full name, address, telephone and fax numbers).
- 3- A complete description of the hazardous substances and waste intended to be handled and the nature and concentration of the dangerous elements contained therein.
- 4- The amount of hazardous substances and waste intended to be handled annually and a description of the method of packing to be used (barrels - tanks - loose).



- 5- The means to be used in storing hazardous substances and waste and the storage period for each, as well as an undertaking to place a clear written description on the container indicating its contents, the degree of danger thereof and how to act in an emergency.
- 6- The available means of transport (by land - rail - sea - air - internal waterways), their routings and schedules.
- 7- A complete statement of the method intended to be used for the treatment and disposal of the hazardous substances and waste for the displacement of which a license is sought.
- 8- A commitment not to mix hazardous substances and waste with any other type of waste produced by social and production activities.
- 9- A commitment to keep registers containing detailed accounts of the sources, quantities and types of hazardous substances and waste, the rates and periods of their collection and storage and the means of their transport and treatment, to furnish such data on request, and not to destroy the registers for a period of five years running from the date they are first opened.
- 10- A commitment to take all procedures as are necessary to ensure the proper packing of hazardous substances and waste during the collection, transportation and storage phases.
- 11- A detailed description of the emergency plan for confronting all unforeseen circumstances which guarantees the protection of human beings and the environment.
- 12- A certificate of previous experience in the field of handling hazardous substances and waste.
- 13- A declaration of the veracity of data stated in such document.

**Conditions for granting a license:**

- 1- Completion of all required data.
- 2- Availability of personnel trained in the handling of hazardous substances and waste.
- 3- Availability of means, resources and systems required for the safe handling of these substances.
- 4- Availability of requirements to confront the risks which may result from accidents occurring during the handling of these substances.

- 5- That no harmful effects to the environment and public health shall result from the activity for which a license is sought.

**Article (27)**

The license to handle hazardous substances and waste shall be issued in consideration of a cash payment to be determined by a decree from the competent minister. The license shall be valid for a maximum period of five years subject to renewal.

The licensing authority may revoke the license or suspend the activity by a reasoned decision in the following cases:

- 1- If the license was issued as a result (of the submission) of incorrect data.
- 2- If the license violates the conditions of the license.
- 3- If the performance of the activity results in dangerous environmental effects which were unforeseen at the time the license was issued.
- 4- The emergence of sophisticated technology which may, with minor modifications, be applied, and the use of which would lead to a marked improvement in the environment and the health of the workers.
- 5- If the EEAA concludes that it is unsafe to handle any of the substances and wastes.

The licensing authority in coordination with the EEAA and the Ministry of Health may request the applicant to fulfill such other conditions as it deems necessary to ensure the safe handling of these substances,. In all cases, the applicant for a license may not handle hazardous substances and waste before obtaining the license made out on the relevant form which must be kept by the person in charge of the handling to be presented on request.

**Article (28)**

The management of hazardous wastes shall be subject to the following rules and procedures:

1- Engendering Hazardous Waste:

The establishment which engenders hazardous waste shall be held to do the following:

- A- Try hard to reduce the rate at which such waste is produced, both quantitatively and qualitatively, by developing the technology used, employing clean technology and selecting alternatives for the primary product or the raw material which are less harmful to the environment and public health.
- B- Categorize the waste produced, in terms of both quantity and quality, and register same.
- C- Establish and operate units to treat waste at source, provided the EEAA approves the treatment system as well as the technical specifications of these units and their operational programmes. In case of difficulty of treatment or disposal of hazardous waste at source, the establishment producing such waste shall be held to collect and transport it to the disposal sites determined by the local authorities and the competent administrative and environmental bodies. The displacement of such waste shall be subject to all the conditions and provisions prescribed in this respect by these Executive Regulations.

2- Stage of Collecting and Storing Hazardous Waste:

- A- Determine specific locations for the storage of hazardous waste meeting safety conditions to prevent the occurrence of any harm to the public or to those persons exposed to such waste.
- B- Store hazardous waste in special containers made of a solid, non-porous, leak-proof material. These containers are to be hermetically sealed and their capacity must be commensurate with the quantity of hazardous waste stored therein or conform to the standards set for the storage of such waste according to type.
- C- Place a clear sign on the hazardous waste containers indicating their contents and warning of the dangers which may result from handling them imprudently.
- D- Lay down a schedule for the collection of hazardous waste so that it is not left for long periods in the storage containers.
- E- Producers of hazardous waste shall be held to provide the above-mentioned containers, wash them after each use and not place them in public places.

3- Stage of Transporting Hazardous Waste:

- A- It is prohibited to transport hazardous waste by other than the means of transport run by the establishments licensed to manage hazardous waste. Those means of transport must meet the following conditions:
    - 1- Transport trucks shall be fitted with all safety equipment and shall be in good working condition.
    - 2- The capacity of such trucks and their shift schedule shall be commensurate with the quantities of hazardous waste.
    - 3- They shall be driven by trained drivers capable of taking independent initiatives, particularly in emergencies.
    - 4- They shall bear clear signs indicating the dangerous nature of their cargo and the best manner of dealing with emergencies.
  - B- Routing of trucks transporting hazardous waste shall be determined and civil defense bodies shall be immediately notified of any changes therein, so as to enable them to act rapidly and decisively in emergencies.
  - C- Trucks transporting hazardous waste shall be prohibited from passing through residential and other populated areas and through the city centre during daytime.
  - D- The address of the garages where hazardous waste trucks are parked, as well as the number and date of their license, must be notified to the competent authority.
  - E- Trucks transporting hazardous waste must be washed and sterilized after each use in accordance with the directives issued by the Ministry of Health in coordination with the competent administrative body designated in Article (40) of these Executive Regulations.
- 4- The following must be observed when authorizing the passage of ships carrying hazardous waste:
- A- Prior notification is a requisite. The competent administrative body shall be entitled to withhold authorization if there is a risk of environmental pollution.
  - B- In case of authorization, all necessary precautions as prescribed in international conventions must be taken, and the ship must have the guarantee certificate referred to in Law No. 4 of 1994.

5- Stage of Treatment and Disposal of Hazardous Waste:

- A- The sites selected to house utilities for the treatment and disposal of hazardous waste shall lie at a distance of at least three kilometres from populated and residential areas, and shall be held to meet the conditions and provide the equipment and installations set forth below:
- 1- The area of the site must be proportionate to the quantity of hazardous waste so that such waste does not remain in storage for extended periods.
  - 2- The site shall be encircled with a brick wall standing at least 2.5 meters high.
  - 3- The site shall be provided with more than one gate of suitable width, allowing the easy entry of trucks transporting hazardous waste.
  - 4- The site shall be provided with a water source and W.C. facilities.
  - 5- The site shall be provided with all the protection and safety requirements prescribed in labour and vocational health laws, as well as with a telephone line.
  - 6- The site shall be provided with all the mechanical equipment which can facilitate the work process.
  - 7- The site shall be provided with warehouses equipped to preserve hazardous waste pending its treatment and disposal. Equipment shall differ according to the type of hazardous waste received by each utility.
  - 8- The utility shall be provided with an incinerator for burning certain type of hazardous waste.
  - 9- The utility shall be provided with the necessary equipment and installations for sorting and classifying certain types of hazardous waste with the intention of reutilizing and recycling them.
  - 10- The site shall have a sanitary ditch of an adequate capacity for burying the incinerated remains.
- B- Processes for the treatment of hazardous waste which may be reused and recycled shall be carried out within the following framework:
- 1- Reutilization of some hazardous waste as fuel to generate energy.

- 2- Recovery of organic solvents and their reutilization in extraction processes.
  - 3- Recycling and reusing some organic substances from hazardous waste.
  - 4- Reusing ferrous and non-ferrous metals and their compounds.
  - 5- Recycling and reusing certain non-organic substances from hazardous waste.
  - 6- Recovery and recycling of acids or alkalines.
  - 7- Recovery of substances used in reducing pollution.
  - 8- Recovery of certain components of ancillary elements.
  - 9- Recovery of used oil and reutilizing it after its refinement, with due consideration to the relationship between environmental and economic returns.
- C- Processes for the treatment of hazardous waste which cannot be reutilized and recycled shall be carried out within the following framework:
- 1- Injecting hazardous waste amenable to pumping into salt mines, wells and natural reservoirs in areas far from residential and populated areas.
  - 2- Burying hazardous waste in pits specially prepared for this purpose and isolated from the other components of the environmental system.
  - 3- Treating hazardous waste biologically by using certain types of living micro-organisms to bring about its decomposition.
  - 4- Treating hazardous waste physically or chemically by evaporation, dilution, calcification, assimilation, sedimentation, etc.
  - 5- Incineration in special incinerators designed to prevent the emission of gases and fumes into the surrounding environment.
  - 6- Permanent storage (such as placing hazardous waste containers inside a mine).

- D- Taking all procedures which guarantee limiting and reducing the production of hazardous waste through:
- 1- Developing and generalizing the use of clean technology.
  - 2- Developing suitable systems for the management of hazardous waste.
  - 3- Expanding the reutilization and recycling of hazardous waste after treatment whenever possible.
- E- Setting a periodic programme to monitor the various components of the environmental system (organic and non-organic) in the sites of utilities and their surroundings for the treatment and disposal of hazardous waste. Licenses shall be withdrawn and work in the utility suspended upon the appearance of any indications of damage to the eco-systems surrounding the utility.
- F- Establishments licensed to handle and manage hazardous substances and waste shall be responsible for any damage caused to third parties as a result of non-compliance with the provisions of these Executive Regulations.

The EEAA shall be competent to review the hazardous waste schedules, which are subject to the provisions of the Law, with the cooperation of the ministries concerned in regard to the schedules issued by them in this connection.

#### **Article (29)**

It is prohibited to construct any establishment for the purpose of treating hazardous waste except with a license issued by the competent governorate after consulting the EEAA, the Ministry of Health, the Ministry of Labour and Manpower, and the ministry concerned with the type of waste according to the provisions of Article (25) of these Executive Regulations, after ensuring that such establishment satisfies all the conditions which guarantee the safety of the environment and the staff employed thereat.

Disposal of hazardous waste shall be effected in accordance with the conditions and criteria prescribed in Article (28) of these Executive Regulations.

The Minister of Housing, after consulting the ministries of Health and Industry and the EEAA, shall determine the locations and conditions for the disposal of hazardous waste.

#### **Article (30)**

It is prohibited to import hazardous waste or to allow its entry into or passage through the territory of the Arab Republic of Egypt.

It is prohibited, without a license from the competent administrative department in the Ministry of Maritime Transport or in the Suez Canal Authority, each within the scope of its competence, to allow the passage of ships carrying hazardous waste, in the Territorial Sea or the Exclusive Economic Zone of the Arab Republic of Egypt, provided the EEAA is notified withal.

### **Article (31)**

Those in charge of the production or displacement of hazardous substances, whether in their gaseous, liquid or solid states, shall take all due precautions to ensure the non occurrence of any environmental damage, and shall be held in particular to observe the following:

- (A) That the site on which such substances are to be produced or stored is selected with due regard to the conditions prescribed according to the type and quantity of those substances.
- (B) That the design of the buildings inside which hazardous substances are to be produced or stored conforms to the engineering standards to be observed for each type of such substances, as determined by a decree to be issued by the Minister of Housing after consulting the EEAA. The said buildings shall be subject to periodic inspections by the licensing administrative body.
- (C) That the conditions prescribed in respect of the means of transport or the storage sites of such substances are provided so as to guarantee that no harm shall come to the environment or to the health of employees or citizens.
- (D) That the technology and equipment used in the production of such substances shall not result in damage to the establishment, the environment or harm to the staff.
- (E) That buildings shall be adequately fitted out with safety, alarm, protection, combat, fire-fighting and first aid systems and equipment, in the numbers and quantities determined by the Minister of Labour and Manpower after consulting the EEAA, the Ministry of Health and the Civil Defense Department in coordination with the competent administrative authority.
- (F) That an emergency plan is in place to confront any potential accidents which may occur during the production, storage, transportation or handling of such substances, provided the plan is reviewed and approved by the licensing authority after consulting the EEAA and the Civil Defense Department.
- (G) That staff in these establishments are subjected to periodic medical checkups and that they are treated for any vocational diseases at the expense of the establishment by which they are employed.



- (H) That establishments producing hazardous substances insure their workers for the amounts to be determined by a decree from the Minister of Manpower in coordination with the Ministry of Insurance and Social Affairs, after consulting the EEAA and the Ministry of Health, provided the amounts of the insurance take into account the degree of danger to which each category of workers is exposed inside each productive unit.
- (I) That workers handling such substances are informed of the dangers involved and of the necessary precautions to be taken when handling them, that they are fully aware of all this information and that they have received adequate training in this regard.
- (J) That the inhabitants of the regions surrounding the sites where hazardous substances are produced or handled are informed of the possible dangers of these substances and the method of facing such dangers, and that they are familiar with the alarm systems to be used in case of an accident and with the procedures to be followed on its occurrence.
- (K) Establishments producing and handling hazardous substances are held to compensate citizens injured in the locations surrounding the production or storage sites for injuries caused by accidents resulting from these activities or from harmful emissions or leakages therefrom. Those assigned to the production and handling of hazardous substances shall submit an annual report on the extent of their commitment in implementing the necessary precautions.

**Article (32)**

Establishments engaged in the production or importation of hazardous substances shall, when producing or importing such substances, observe the following conditions:

**Firstly: Container specifications:**

- (A) The type of container in which these substances are placed must be suitable for the type of substance therein, tightly closed and difficult to damage.
- (B) The capacity of the container must be easy to lift or transportation without exposing it to damage or harm.
- (C) The inner lining of the container must be made of a material that is not affected by storage throughout the period when the substances contained therein are active.

**Secondly: Container information:**

- (A) Contents of container, their active substance, and the degree of its concentration.
- (B) Total and net weight.
- (C) Name of producer, date of production and production number.
- (D) Nature of danger and symptoms of toxicity.
- (E) First aid procedures to be taken in case of exposure.
- (F) Safe method of opening, emptying and using container.
- (G) Safe storage method.
- (H) Methods of disposal of empty containers.

All the information shall be written in Arabic in a style that is easy for an ordinary person to read and understand, and the words must be legible and prominently displayed on the container. They must be accompanied by diagrams indicating the method of opening, emptying, storing and disposing of the containers as well as by the international symbols for danger and toxicity.

**Article (33)**

The owner of an establishment whose activity results in hazardous waste pursuant to the provisions of these Executive Regulations shall be held to keep a register of such waste and the method of its disposal, as well as of the names of the parties contracted with to receive the said waste, as follows:

- 1) Name and address of the establishment.
- 2) Name and job title of the person responsible for filling in the register.
- 3) The period covered by the current data.

- 4) The special conditions issued for the establishment by the EEAA.
- 5) A list of the types and quantities of hazardous waste resulting from the establishment activity.
- 6) Method of disposal thereof.
- 7) The parties contracted with to receive the hazardous waste.
- 8) Date on which the form is filled.
- 9) Signature of the officer in charge.

The EEAA shall follow up the information in the register to ensure its conformity with reality.

## **PART TWO**

### **PROTECTION OF AIR ENVIRONMENT FROM POLLUTION**

#### **Article (34)**

Without prejudice to the provisions of Articles (10) and (11) of these Executive Regulations, the site on which a project is established must be suitable for the establishment activity in regard to its conformity with the zoning requirements of the area and its compliance with the plan set for the use of the land by the Ministry of New Urban Communities, and the total amount of pollution emitted by all the establishments in any one area must be within the permissible levels as indicated in Annex (5) of these Executive Regulations.

In all cases, due consideration shall be given when determining the suitability of the site to the prevailing wind direction and its distance from habitation, whether in the area of the project or the surrounding areas.

#### **Article (35)**

All the establishments listed in Annex (2) of these Executive Regulations for which an assessment of environmental impact is required prior to their being licensed to exercise their activity shall be subject to the provisions of the preceding Article. The license confirming the suitability of the site shall be issued by the body competent to assess the environmental impact of such activity after referring to the EEAA in this regard.

**Article (36)**

In carrying out their activities, establishments subject to the provisions of this Law are held to ensure that emissions or leakages of air pollutants do not exceed the maximum limits permitted by laws and decrees in force and determined in Annex (6) of these Executive Regulations, and that no changes are introduced to the properties and specifications of natural air that can result in endangering human health and the environment.

**Article (37)**

It is prohibited to use machines, engines or vehicles which emit exhaust whose contents exceed the following maximum limits:

1. Vehicles currently in service:

CARBON MONOXIDE:	7% in volume at the speed of (600-900 R.P.M.)
UNBURNED HYDROCARBONS:	1000 parts in a million, at the speed of (600-900 R.P.M.)
SMOKES	65% degree of opacity or the equivalent in other units, at minimum acceleration

2. New vehicles licensed as of 1995:

CARBON MONOXIDE:	4.5% in volume at the speed of (600-900 R.P.M.)
UNBURNED HYDROCARBONS:	900 parts in a million, at the speed of (600-900 R.P.M.)
SMOKES	50% degree of opacity or the equivalent in other units, at maximum acceleration.

The provisions of this Article shall apply in the governorates to be determined by a decree of the Minister of Interior, provided the decree shall allow a period not exceeding one year for commencement of implementation to enable the owners of these machines, engines, and vehicles to adjust them in accordance with the provisions of this Article.

The EEAA, in coordination with the Ministry of Interior, the Ministry of Industry, the Ministry of Health and the Ministry of Petroleum, may reconsider the maximum limits prescribed in this Article three years after the publication date of these Executive Regulations.

**Article (38)**

It is prohibited to dump, treat or burn garbage and solid waste - other than infectious waste left over from medical care in hospitals and health centers - except in special sites, designated for such purpose, far from inhabited, industrial or agricultural areas as well as from waterways, in accordance with the specifications, conditions and minimum permissible distances from such areas as indicated hereunder:

- (1) It is strictly forbidden to burn any waste other than the infectious waste referred to in para 1 of this Article in residential or industrial areas and such waste shall be incinerated in special incinerators having the following specifications:
  - (A) They shall be downwind in the populated areas.
  - (B) They shall be at a distance of at least 1500 meters from the nearest residential area.
  - (C) The capacity of the incinerator or incinerators shall be adequate to burn the garbage transported thereto within 24 hours.
  - (D) The incinerator shall be sited in a place with an adequate space to receive the expected garbage according to the nature of activities in the urban area and the number of its inhabitants.
  
- (2) In case of extreme necessity, and within a transition period not exceeding three years from the date of publication of these Executive Regulations, garbage shall be allowed to be burned uncovered, subject to the following conditions:
  - (A) With a prior permit from the EEAA and the Civil Defense Department, incineration shall be carried out under the supervision of both the municipal authority units and the Civil Defense Department.
  - (B) That the place where the garbage is incinerated stands at a minimum distance of 1.5 kilometers from populated, industrial and downwind areas.
  - (C) The municipal authorities shall allocate a site to receive the garbage after carrying out an integrated study on the topography and nature of the area, and the quantity of waste requiring to be disposed of every 24 hours, which site shall be:
    - At a lower contour level than the surrounding area.
    - Of an area adequate for storing the garbage intended to be transported and for carrying out other operations normally effected on the site, such as sorting and any other related operations.
    - Supplied with a water source for emergency cases and other necessary uses.

- Supplied with the necessary equipment for storing, sifting and disposing of ashes by burying them so that they will not be dispersed in the air or leak into the underground water.
- (3) Infectious waste from hospitals and health centres shall be burned on site in incinerators especially designed for that purpose and capable of absorbing the collected quantities without congestion or storing near the incinerator. In case of necessity, and with the approval of the competent municipal authorities and the EEAA, the waste of such units may be transported to the nearest hospital equipped with one or more incinerators, provided they can absorb the waste transported thereto. Such waste is transported in sealed containers which do not allow the dispersal of their contents in the air and the containers are incinerated together with their contents.
- (4) In all cases, the incinerators shall be fitted with adequate technical methods to prevent the dispersal of ashes or the emission of gases except within the permissible limits as prescribed in Annex (6) of these Executive Regulations.
- (5) Municipal authorities shall, in agreement with the EEAA, allocate sites where solid garbage shall be dumped, treated or incinerated according to the provisions of this Article.

#### **Article (39)**

Collectors of garbage and solid waste shall be held to maintain the cleanliness of garbage bins and vehicles, the continual cleanliness of which shall be one of the conditions set to ensure the safety and solidity of garbage transport means.

Garbage collection bins shall be tightly covered to prevent them from giving off offensive odours or from becoming a source for the proliferation of flies and other insects or a focus of attraction for stray animals. The garbage they contain shall be collected and transported at suitable intervals in keeping with the conditions of each area, provided the quantity of garbage at any one time in any of these bins shall not exceed its capacity. The competent municipal department shall control the implementation of the provisions of this Article.

#### **Article (40)**

It is prohibited to spray or use pesticides or any other chemical compounds for purposes of agriculture, public health or otherwise except after observing the conditions, regulations and guarantees set by the Ministry of Agriculture, the Ministry of Health and the EEAA, particularly the following:

- (A) Before spraying pesticides by any method, notify the health and veterinary units of the types of pesticides used and their antidotes.
- (B) Provide first aid facilities.

- (C) Provide protective clothing and material for the workers involved in spraying.
- (D) Warn citizens against approaching the sprayed areas.
- (E) Have the spraying carried out by workers trained in that type of work.
- (F) Refrain from spraying by planes except in cases of extreme necessity as assessed by the Minister of Agriculture. In such event, the areas requiring spraying shall be delineated and highlighted by a special colour on maps which shall indicate the main obstacles to aviation and the regions in which spraying is prohibited. Regions in the vicinity of residential areas, apiaries, fish farms, poultry farms and cattle sheds shall be kept off to guarantee that humans, animals, plants, waterways and other components of the environment shall not be exposed, directly or indirectly, now or in future, to the harmful effects of such pesticides or chemical compounds.

#### **Article (41)**

All organizations and individuals shall be held, when carrying out exploration, excavation, construction or demolition works, or when transporting the resultant waste or debris, to take necessary precautions to secure the safe storage or transportation thereof. The authority granting the building or demolition license shall indicate these requirements in the license in the manner set forth below:

- 1- That on-site storage of waste or debris be effected with due regard to the requirements of safety and the unobstructed movement of traffic and people. Waste liable to dispersal shall be covered to avoid air pollution.
- 2- That waste or debris resulting from excavation, demolition and construction works be transported in special containers or receptacles on trucks equipped and licensed for this purpose and meeting the following conditions:
  - < Fitted with a special box or an air-tight cover to prevent loose particles of waste and debris from escaping into the air or dropping on the road.
  - < Provided with special loading and unloading equipment.
  - < In good condition according to the rules of safety, solidity and lights and fitted with all safety equipment.
- 3- That the sites assigned to receive the transported waste be located at a minimum distance of 1.5 kilometers from residential areas, that they are at a lower contour level, and that they are levelled after being filled in with the waste.
- 4- That the municipal authorities designate the sites to which the waste shall be transported. Such waste may not be transported to or disposed

of in other than the sites designated and licensed for that purpose by the municipal authorities concerned.

### **Article (42)**

Due consideration shall be given by the competent bodies, according to their activities, when burning any type of fuel or other substance, whether for industrial, energy production, construction or other commercial purpose, that the harmful smoke, gases, and fumes resulting from the combustion process are within the permissible limits. Persons responsible for such activity shall be held to take all precautions to minimize the pollutants in the combustion products according to the following criteria:

### **Precautions, Permissible limits, and Specification of Chimneys**

- (A) The necessary precautions to minimize the pollutants resulting from the combustion process in order to prevent or reduce the emission of pollutants from the fuel-burning source, entail selecting the appropriate fuel, ensuring the proper design of furnaces, fire-boxes, and chimneys and using high-efficiency control means according to the following criteria:
- 1- It is prohibited to carry out uncovered burning when the requirements of sound design to guarantee full combustion and disposal of exhaust through the chimneys according to proper engineering specifications are not adequate.
  - 2- Furnaces and fire-boxes shall be designed to allow the circulation of a sufficient quantity of air for oxidization and full combustion and to ensure the even distribution of temperature. They shall be operated for a sufficient length of time, and their contents constantly stirred and mixed, to guarantee total combustion, minimize the emission of resultants of incomplete burning and ensure that the pollutants emitted are within the maximum permissible limits pursuant to Annex (6) of these Executive Regulations.
  - 3- The use of coal shall be prohibited in populated regions and near residential areas.
  - 4- The use of Mazout and other heavy oil products, as well as of crude oil, shall be prohibited in residential areas.
  - 5- The percentage of sulphur in fuel used in urban areas close to residential districts shall not exceed 1.5%.
  - 6- Gases containing carbon dioxide shall be emitted through chimneys that are high enough to ensure that the gases are diluted before reaching ground level. When using fuel containing high percentages of sulphur in power stations, industrial plants



and other establishments in remote areas, due consideration shall be given to atmospheric factors and to maintaining sufficient distances to prevent the sulphur from reaching residential or agricultural areas and waterways.

(B) Chimney heights:

- 1- The heights of chimneys from which a total emission of waste reaches 7000 - 15000 kg/hour shall be between 18 and 36 metres.
- 2- The heights of chimneys from which a total emission of waste exceeds 15000 kg/hour shall be at least two and a half times the height of surrounding buildings, including the building served by the chimney.
- 3- The height of chimneys serving public places such as offices, restaurants, hotels and other commercial activities shall be at least 3 metres higher than the edge of the building (top of the building), and measures shall be taken to accelerate the speed at which gas is emitted from the chimney.

(C) Maximum Limits of Emission from Fuel-Burning Sources:

Pollutant	Maximum Permissible Limit
SMOKE	- 1 (Using Ringlemann Card)
DISPERSED ASHES	- 1 Ringlemann - sources existing in urban regions, or close to residential areas. - 2 Ringlemann - sources far from habitation. - 2 Ringlemann - burning of wastes.
SULPHUR DIOXIDE	Existing 4000 mgms/m <sup>3</sup> New 2500 mgms/m <sup>3</sup>
ALDEHYDES	Burning of waste 20 mgms/m <sup>3</sup>
CARBON MONOXIDE	Existing 4000 mgms/m <sup>3</sup> New 2500 mgms/m <sup>3</sup>

\* (1) Ringlemann = 250 milligrams/cubic metre

\* (2) Ringlemann = 500 milligrams/cubic metre

The competent administrative body is held to observe the provisions of this Article.

**Article (43)**

All organizations undertaking activities in the field of exploration, drilling, extraction, production, refining and processing of crude oil shall be held to observe the principles and standards derived from the international oil industry and furnished by the competent administrative authority as well as those indicated hereunder:

- (1) Organizations engaging in exploration, drilling, extraction and production of crude oil for petroleum and petrochemical products, as well as in the production, refining, storage and transportation of gas, shall observe the conditions, procedures, and precautions necessary for the protection of the environment, as derived from international oil industry principles and approved for application by the Egyptian General Petroleum Corporation, according to the nature of each project, establishment, or operation.
- (2) Executives responsible for petroleum activities shall follow the instructions of the Egyptian General Petroleum Corporation concerning the permissible international standard specifications with regard to methods and ways of safe operation in all matters related to the storage and transportation of petroleum, petrochemicals and gas, as well as to the disposal of water and other dispensable substances while avoiding loss of petroleum or gas. They shall also take necessary precautions with regard to protection from fire, the protection of machines, wells, workers, homes, oil stores and establishments, and all other measures which the Egyptian General Petroleum Corporation considers necessary to regulate and guarantee the proper conduct of work and to preserve the environment and the neighbouring inhabitants. These measures shall include in particular:
  - A- Ensuring that exploratory or productive wells are at a safe distance from assembly and production stations and any other industrial establishment, workshops, the main or subsidiary pipelines, houses, religious and social establishments and cemeteries.
  - B- Observing the conditions of distance when using explosives, whether in seismic survey operations or pipeline laying operations.
  - C- Providing the wells with the necessary substances, equipment and valves to prevent explosions and oil or gas leakage.
  - D- Installing the separating and flare equipment necessary for carrying out the processes of producing, transporting, operating and refining petroleum and petrochemical substances and gas.
  - E- Taking necessary precautions to prevent the leakage of uncollectable oil and gas extracted in tests conducted during the drilling and completion of wells, as well as any other oil or gas that must be burned either in open pits or in flares. Due care shall be taken to make the optimum selection as regards the number and size of the nozzles and flares for the burning process, the use of the sprinkling process or additional air, or the possibility of using diesel fuel to complete the burning of heavy crude oil.
  - F- Installing the chimneys, flares and vents required for the production, operation, refining and storage processes conducted

at the power stations belonging to the establishment, whether for the cold or hot gases emitted.

- G- Laying down the necessary plans, preparing the machines and equipment and appointing and training personnel to confront any leakages or fires which occur at wellheads, pipelines, maritime or industrial establishments, storage tanks, warehouses, workshops, houses or any other similar establishment within the scope of the organization business.
- H- With regard to storage tanks, the following shall be observed:
  - 1- They shall be situated no closer than the minimum prescribed distance from the edge of main roads, railways, other storage facilities, buildings and places exposed to fire.
  - 2- They shall be tightly closed and the leakage of excess fumes shall be regulated in accordance with international standard specifications.
  - 3- They shall be painted white or any other light colour.
  - 4- Each tank shall be surrounded with walls to contain the leakage of oil, if any, and the walls shall be provided with outlets to drain rain water, provided the volume of the substance that can be contained is equivalent to the size of the tank or conforms to international specifications used in designing petrochemical storage tanks.

Compressed air shall be used in measuring and operating equipment, instead of compressed dry gas, whenever possible.

- (3) All operational machinery and equipment shall be in good working order and shall satisfy all the necessary conditions for their efficient use. Their capacity must be adequate for the work they are designed for and they shall undergo the necessary maintenance, servicing, and inspection operations on a regular basis.
- (4) The gases which accompany oil and which cannot be used or exploited safely in accordance with international standard specifications shall be disposed of.
- (5) Mechanical and chemical means shall be used to extract the highest proportion of residual waste from wells or tanks. Pits or reservoirs shall be made available to receive what remains of such residues after their treatment in a suitable location meeting safety requirements of distance from wells, petroleum and industrial establishments and dwellings.

It is strictly prohibited to allow such residues to debouch onto land surfaces, public roads, waterways, seas and shores.

**Article (44)**

All organizations and individuals shall be held, when carrying out production, service or other activities, particularly when operating machinery and equipment and using horns or loudspeakers, to keep the volume below the permissible sound intensity levels inside the work place and in the closed public places indicated in table (1) of Annex (7) of these Executive Regulations.

Licensing authorities shall ensure that the total sounds emanating from fixed sources in one area shall be within the permissible levels and shall ascertain that the establishment has selected the appropriate machinery and equipment to guarantee this in accordance with the permissible levels of sound intensity and the time limits for exposure thereto as prescribed in Table (2) of Annex (7) of these Executive Regulation

**Article (45)**

The owner of an establishment is held to take the necessary precautions and procedures laid down by the Ministry of Manpower and Employment to prevent the leakage or emission of air pollutants inside the work place except within the permissible limits indicated in Annex (8) of these Executive Regulations, whether such pollutants result from the nature of the establishment activities or from malfunctioning equipment. He is also held to provide the necessary protective measures for workers in accordance with the conditions of occupational safety and health, including choosing the appropriate machinery, equipment, material and types of fuel, taking into account the period of exposure to these pollutants. He must also ensure adequate ventilation and install chimneys and other air purification devices.

**Article (46)**

The owner of an establishment shall take the necessary measures to maintain temperature and humidity inside the work place within the permissible limits. In cases where it is necessary to work beyond these limits, he shall be held to secure appropriate protective measures for the workers, whether by providing them with special clothing or otherwise. Annex (9) of these Executive Regulations sets the maximum and minimum limits of temperature and humidity and the duration of exposure thereto, as well as the protective measures.

**Article (47)**

Closed and semi-closed public places shall have adequate ventilation systems consistent with the size of the place and its assimilative capacity, as well as with the type of activity exercised therein, to ensure renewal and purity of air and maintain it at a suitable temperature.

The following table shall indicate the quantities of air necessary for ventilating public places:

Quantity of External Air*** Cubic Decimetre/ Minute/Person	Type of Place and Activity
140 - 280	Places with a high ceiling, banks, lecture halls, places of worship, large public places, theatres, non-smoking rooms
280 - 420	Apartments, hairdresser salons, beauty parlours, hotel rooms, or rooms with limited smoking.
420 - 560	Cafeterias, shops containing a small restaurant, work places, hospital rooms, restaurants or rooms with medium smoking.
560 - 850	Private work places, office, clinics or rooms with heavy smoking.
850 - 1700	Lecture halls, night clubs or crowded rooms with heavy smoking.

\*\*\* without use of air conditioners.

- The space allocated for each person shall not be less than 4.25 cubic metres
- The floor area allocated for each person shall not be less than 1.4 square metres.

#### **Article (48)**

The director in charge of the establishment shall take adequate measures to ban smoking in closed public places except within the designated smoking area. Smoking in other than such area shall be considered an administrative infraction and shall render its perpetrator liable to the disciplinary penalty in force in the establishment.

#### **Article (49)**

The level of radioactivity or concentrations of radioactive substances in the air shall not exceed the permissible limits as defined in a decree to be issued by the Minister of Electricity and Energy responsible for nuclear safety after referring to the Ministry Health and the EEAA within the period prescribed in Article 2 of Law No. 4 of 1994.

### **PART THREE**

#### **PROTECTION OF WATER ENVIRONMENT FROM POLLUTION**

##### **Chapter I** **Pollution from Ships**

## **Section 1** **Oil Pollution**

### **Article (50)**

The owner of the ship, its master or any person responsible therefor and those responsible for means of oil transport within the port areas or the territorial sea or the exclusive economic zone of the ARE and the companies working in the field of oil extraction are held to notify the competent administrative authorities of any oil spill immediately on its occurrence, with a description of the circumstances of the accident, the type and quantity of oil involved and the measures taken to stop or reduce the spill. The notification must include the following information:

- 1- The procedures taken to deal with the spill.
- 2- The quantity and type of dispersants used.
- 3- The probable source of the spill and whether a fire broke out or not.
- 4- The direction of the formed oil spill.
- 5- The rate of leakage, if continuing.
- 6- The dimensions of the oil spill.
- 7- The wind velocity, the air temperature and the extent of visibility.
- 8- The direction and speed of the current and the water temperature.
- 9- The condition of the sea.
- 10- The condition of the tide (strong, high, medium, weak).
- 11- The threatened coastal areas.
- 12- The nature of the area - coral reef - marine organisms.
- 13- The reporting source: name - telephone number - address.

In all cases, the competent administrative authorities are held to notify the EEAA of all particulars concerning the accident promptly on its occurrence, in order to enable it to follow up the measures taken in this regard in accordance with its responsibilities as prescribed in Article (5) of the Environment Law.

### **Article (51)**

All loading ports and ports equipped to receive oil tankers and dockyards must be fitted out with the necessary equipment to receive unclean ballast water and the bilge water from cleaning the tanks of oil tankers and other ships.

Ports must be equipped with enough barges and containers to receive the deposits, residues, and waste of oil and oily mixtures from ships docked in port.

The competent administrative authority shall receive any ship or tanker and direct it to the locations designated for the disposal of waste and unclean ballast water.

No ship or tanker may be licensed to carry out loading and unloading works except after referring to the competent administrative authority that will receive and direct it to the locations for the disposal of waste and unclean ballast water.

### **Article (52)**

Owners or masters of ships registered in the ARE as well as of ships pertaining to the states adhering to the Convention are held to keep on board a register of the oil in which shall be entered all operations relating to oil in the manner determined in the Convention, and in particular the following operations:

- a- Loading, delivery or other oil cargo transport operations, while designating the type of oil.
- b- Discharge of oil or oily mixtures to secure the safety of the ship or its cargo or to save lives, while designating the type of oil so discharged.
- c- Oil or oily mixture spills as a result of a collision or accident, while indicating the size of the spill.
- d- Discharge of unclean ballast water or of bilge water from cleaning the tanks.
- e. Disposal of polluting waste.
- f. Discharge of the bilge containing the oil, collected within the machinery space, outside the ship while in port.

The process of discharging oil or oily mixtures in respect of offshore platforms installed in the water environment shall be recorded in a special register corresponding to the oil register provided for in this Article, in which the following information shall be entered:

- (1) The name and location of the platform.
- (2) The license issued therefor.
- (3) The name of the platform owner.
- (4) The activity carried out by the platform.

- (5) A statement of the systems, equipment, instruments and units for the treatment of oil and oily mixtures before their discharge and the system for controlling and monitoring them.
- (6) The quantity and type of substances and liquids authorized to be discharged in the course of the year, and the rate of discharge.
- (7) The actual quantity of substances and liquids discharged.
- (8) A statement of breakdowns in the system, equipment, instruments and units for the treatment of oil and oily mixtures, indicating the date and duration of the breakdown and the results of the analysis carried out immediately following repairs.
- (9) The name and signature of the person in charge of filling in the register.
- (10) Date on which the information is entered in the register.

#### **Article (53)**

In application of the provisions of Article 59 of the Environment Law, a guarantee certificate must be presented when the tanker enters the territorial sea. It must be valid and cover all damages and compensation as assessed by the competent administrative authority in agreement with the EEAA.

### **Section 2** **Pollution from Sewage and Garbage**

#### **Article (54)**

Ships and offshore platforms are prohibited from discharging polluted wastewater in the territorial sea or the exclusive economic zone of the Arab Republic of Egypt. It must be disposed of according to the criteria and procedures indicated hereinbelow:

#### **Procedures for the discharge of polluted waste water from ships and offshore platforms:**

Ships and offshore platforms of all nationalities shall be held to observe the following conditions and criteria when discharging their waste water:



- 1- That the ship or offshore platform holds the international certificate for the prevention of pollution by waste water drainage and that such certificate is valid.
- 2- That the ship is fitted with a unit for the treatment of waste water.
- 3- No ship is permitted to discharge treated waste water at a distance of less than four nautical miles from the shore.
- 4- Ships discharging such waste before treating it may only do so at a distance of 12 nautical miles from the shore.

In all cases, no ship may discharge the waste water retained in the retention tanks all at once but at moderate rates while the ship is sailing at a speed of not less than 4 knots/hour.

Sewage disposal processes of whatever kind must neither lead to the appearance of solid bodies, visible to the naked eye, floating in the territorial waters nor to any change in the colour of such waters.

If the waste water is mixed with residual water which requires treatment, such treatment must be carried out before the waste water is discharged.

The foregoing provisions shall not apply if discharge is effected to secure the safety of the ship and the people on board, to save lives at sea, or as a result of damage to the ship or its equipment, provided all reasonable precautions were taken to prevent or drastically reduce such discharge before and after the occurrence of the damage.

#### **Article (55)**

The competent bodies shall provide the necessary facilities for receiving waste, polluted waste water and refuse from ships and ensure that such facilities are in good working order, well maintained and regularly cleaned and sterilized.

#### **Article (56)**

The competent bodies in coordination with the competent bodies and the municipal authorities shall, when transporting the waste gathered in the facilities referred to in the preceding Article, ensure that such waste is not dispersed, that no offensive odours emanate therefrom and that it is disposed of in the locations and according to rules prescribed in Public Hygiene Law No. 38 for 1967.

### **Chapter II**

## **Pollution from Land Based Sources**

### **Article (57)**

No building permit shall be granted for the construction of any establishments or public places on or near the seashore which would result in the discharge of polluting substances in violation of the provisions of the Law, of these Executive Regulations and of the decrees issued in implementation thereof unless the provisions of Chapter I of Part One of these Executive Regulations relating to development and the environment are duly observed. The permit holder shall provide suitable and adequate units for the treatment of waste which he shall begin operating promptly when the establishment commences operations. He is held to secure the safety and maintenance of these units on a regular basis.

### **Article (58)**

Without prejudice to Article 2 of the Decree issuing these Executive Regulations, industrial establishments authorized to discharge degradable polluting substances into the water environment and on the beaches adjacent thereto are forbidden to discharge such substances except after they are treated and rendered compatible with the specifications and criteria prescribed in Annex (1) of these Executive Regulations.

The Ministry of Health shall conduct periodic analyses of samples of the treated liquid waste in its laboratories and notify the results to the competent administrative bodies.

If the results of any analysis do not conform to the specifications and criteria prescribed in Annex (1), the EEAA shall be notified accordingly and shall take administrative procedures, jointly with the competent administrative authority, in order to consider granting the party concerned licensed to perform his activities pursuant to the provisions of these Executive Regulations a grace period of one month to treat the waste so as to render it compatible with the prescribed specifications and criteria. This shall be without derogation to the periods prescribed in Article 2 of the Decree issuing these Executive Regulations for establishments existing at the time of their issuance. If treatment is not effected within the period prescribed above, or if it is proved from the analysis during such period that the continuation of discharge is likely to harm the water environment, discharge shall be halted by administrative means and the establishment license withdrawn, without prejudice to the penalties prescribed in the Environment Law. Industrial establishments are prohibited from discharging the non-degradable polluting substances referred to in Annex (10) of these Executive Regulations into the water environment.

### **Article (59)**

It is prohibited to issue building permits for the construction of any establishment on the seashores of the Arab Republic of Egypt at a distance of

two hundred metres inwards from the shoreline, except after obtaining the approval of the Egyptian General Authority for the Protection of Beaches, in coordination with the EEAA.

The following procedures shall be followed in respect of permits for the construction of these establishments:

- A- The application shall be submitted in writing to the coastal governorate concerned (the licensing authority), indicating the type of establishment to be constructed within the prohibited zone, together with an attached study assessing the environmental impact of the project or of new works requiring to be carried out, including their effect on the environmental balance of the coastal area, and on the shore line, and in particular on the following factors:
- 1- Erosion
  - 2- Sedimentation
  - 3- Coastal currents
  - 4- Pollution resulting from the project or works

The application shall include a detailed statement of precautions proposed to avoid or treat these effects, if any.

- B- The coastal governorate shall forward the application to the Egyptian Authority for the Protection of Beaches to express its technical opinion on the project, in coordination with the EEAA. The coastal governorate shall also forward the study assessing the environmental impact of the project to the EEAA to review same and render its opinion thereon within sixty days from the date of receiving the said study.
- C- The Egyptian Authority for the Protection of Beaches may charge the applicant with the costs of the surveys and studies it carries out.

The Minister for Environmental Affairs, after consulting the competent administrative authorities and the governorates concerned, shall issue the conditions for granting a building permit to construct the establishment within the prohibited zone, or to modify the shoreline.

#### **Article (60)**

It is prohibited to authorize the carrying out of any works which may affect the natural shoreline of the beach or alter its configuration either inwards or outwards, except after obtaining the approval of the Egyptian Authority for the Protection of Beaches in coordination with the EEAA. With regard to applications which may affect the natural shoreline of the beach or modify same, the procedures and conditions prescribed in the preceding Article shall be applied.

### **Chapter III**

#### **Administrative and Judicial Procedures**

##### **Article (61)**

The judicial officers vested with the power to effect seizures referred to in Article 78 of the Environment Law are authorized, in cases of violations for which the penalty does not exceed payment of a fine or compensation, to allow the master of the ship or an officer in charge to leave the port immediately, if he so wishes, against payment of a temporary amount pending execution of the fine or compensation penalty to be later adjudged, within the limits prescribed in Part Four of the Environment Law, provided such temporary amount shall not be less than the minimum prescribed for the violation plus all costs and compensation to be determined by the competent administrative authority for the removal of the effects of the violation. These amounts shall be deposited, no later than the day after their collection, in the Environmental Protection Fund pursuant to the provisions of Article (7) of these Executive Regulations.

A financial guarantee covering the value of such amounts and acceptable to the competent administrative authority may be presented subject to the provisions of the International Convention on Civil Liability for Oil Pollution signed in Brussels in 1969.

##### **Article (62)**

The Minister in charge of Environmental Affairs shall issue a decree establishing an appeals committee having its headquarters within the working area of the ports or on the premises of a nearby administrative authority. It shall be constituted as follows:

- |  |          |
|--|----------|
| - Counselor from the State Council selected by the president of the Council  | Chairman |
| - Representative of the EEAA   | Member   |
| - Representative of the Ports and Lighthouses Department   | Member   |
| - Representative of the Ministry of Defence  | Member   |
| - Representative of the Ministry of Petroleum  | Member   |
| - Representative of the competent administrative authority within the scope of the activities of which the dispute arose | Member   |

The committee may solicit the advice of one or more experts in the field of water environment.

The function of this committee shall be to settle administrative disputes arising from the application of the provisions of Part Three of these Executive

Regulations. The committee shall issue its decision, after hearing both parties, by a majority of votes of members present and, in case of a tie, the chairman shall have the casting vote.

Parties concerned may challenge the committee's decision before the administrative courts of the State Council.

### **Article (63)**

The competent administrative authorities may request assistance from the ministries of defense, interior, petroleum, maritime transport, from the Suez Canal Authority or from any other competent body, in implementing the provisions of Part Three of these Executive Regulations according to the conditions laid down in the decree to be issued by the Minister for Environmental Affairs.

## **Part Four** **FINAL PROVISIONS**

### **Article (64)**

The costs of removing the effects of the violation referred to in Article 91 of the Environment Law shall be determined according to the following criteria:

- (A) The proximity or distance of unloading from the shore, in particular the areas of economic or touristic importance or the nature reserves.
- (B) Degree of toxicity of unloaded substances.
- (C) Volume and type of pollutant, and its detrimental effect on the environment.

### **Article (65)**

Every citizen or association concerned with environmental protection may resort to the competent administrative or judicial agencies for the purpose of applying the provisions of the Environment Law and of these Executive Regulations. The Ministry of Interior, in coordination with the EEAA, shall form a police force specialized in environmental protection within the ministry and security departments in the governorates, whose function shall be to enforce the provisions of laws and decrees related to environmental protection as well as to receive complaints and reports submitted in this connection and take legal procedures in respect thereof.

**ANNEXES TO THE EXECUTIVE REGULATIONS OF ENVIRONMENT LAW**  
**NO. 4 OF 1994,**

<b>ANNEX NO.</b>	<b>SUBJECT</b>
1	Criteria and specifications for certain substances when discharged into the marine environment.
2	Establishments subject to environmental assessment.
3	Model register of impact of an establishment activities on the environment [Environmental Condition Register].
4	Wild birds and animals prohibited from being hunted, killed or captured.
5	Maximum limits of outdoor air pollutants.
6	Permissible limits of air pollutants in emissions.
7	Permissible limits of sound intensity and periods of safe exposure thereto.
8	Maximum limits of air pollutants inside the work place according to type of industry.
9	Maximum and minimum limits of temperature and humidity, period of exposure thereto, and means of protection therefrom.
10	Non-degradable polluting substances which industrial establishments are prohibited from discharging into the marine environment.

**ANNEX (1)****CRITERIA AND SPECIFICATIONS FOR CERTAIN SUBSTANCES WHEN  
DISCHARGED INTO THE MARINE ENVIRONMENT**

Without prejudice to the provisions of Law No. 48 of 1982 concerning the Protection of the River Nile and its Executive Regulations, the discharge of the substances indicated hereunder shall not exceed the levels indicated opposite each.

In all cases, discharge into the marine environment is not permitted except at a minimum distance of 500 meters from the shoreline and may not be effected in fishing zones, bathing zones or nature reserves in order to preserve the economic or aesthetic value of the area.

<b>Item</b>	<b>Maximum limits of Criteria and Specifications (mg/Ltr-unless otherwise indicated.)</b>
Temperature	Not to exceed 10 degrees over the prevailing rate.
PH	6 - 9
Colour	Free of colouring materials
Biochemical Oxygen Demand ( BOD)	60
Chemical Oxygen Demand (COD)	100
Total Dissolved Solids	2000
Volatile Solids	1800
Suspended materials	60
Turbidity	NTU 50
Sulphides	1
Oil and Greases	15
Hydrocarbons of oil origin	0.5
Phosphates	5
Nitrates	40
Phenolates	1
Fluoride	1
Aluminium	3
Ammonia (nitrogen)	3
Mercury	0.005

Lead	0.5
Cadmium	0.05
Arsenic	0.05
Chromium	1
Copper	1.5
Nickel	0.1
Iron	1.5
Manganese	1
Zinc	5
Silver	0.1
Barium	2
Cobalt	2
Pesticides	0.2
Cyanide	0.1
Estimated Fecal Coliform Count in 100 cm <sup>3</sup>	5000



**ANNEX (2)****ESTABLISHMENTS SUBJECT TO THE ENVIRONMENTAL  
IMPACT ASSESSMENT**

These establishments are classified according to the following criteria:

- First: Type of activity.
- Second: Extent of depletion of natural resources, especially water, agricultural land and mineral wealth.
- Third: Location
- Fourth: Type of energy used in operating the establishment.

**FIRST: TYPE OF ACTIVITY:**

1. Industrial establishments subject to the provisions of Law No. 21 of 1985 concerning the Organization and Encouragement of Industry and Law No. 55 of 1977 concerning the Establishment and Operation of Thermal Machines and Steam Boilers.
2. Tourist Establishments subject to the provisions of:
  - \* Law No. 1 of 1973 concerning Hotel Establishments.
  - \* Law No. 38 of 1977 concerning the Organization of Tourist Companies.
  - \* Law No. 117 of 1983 concerning the Protection of Monuments.
  - \* Law No. 1 of 1992 concerning Tourist Establishments
3. Companies operating in the field of oil exploration, extraction, refining, storage, and transport and subject to the provisions of:
  - \* Law No. 6 of 1974 authorizing the Minister of Petroleum to sign Petroleum Concession Agreements.
  - \* Law No. 4 of 1988 concerning Petroleum Pipelines.
4. Electricity production and generation establishments subject to the provisions of:
  - \* Law No. 145 of 1948 establishing the Cairo Electricity and Gas Department.
  - \* Law No. 63 of 1974 concerning Establishments of the Electricity Sector.
  - \* Law No. 12 of 1976 establishing the Egyptian Electricity Authority.
  - \* Law No. 13 of 1976 establishing the Nuclear Electricity Generating Plants Authority.
  - \* Law No. 27 of 1976 establishing the Rural Electricity Authority.
  - \* Law No. 102 of 1986 establishing the Authority for the Development and Utilization of New and Renewable Energy.

5. Companies operating in mines and quarries, and in the production of building materials, which are subject to the provisions of:
  - \* Law No. 66 of 1953 concerning Mines and Quarries.
  - \* Law No. 86 of 1956 concerning Mines and Quarries.
6. All infrastructure projects, including plants for the treatment and recycling of waste water or agricultural drainage water, irrigation projects, roads, bridges, barrages, tunnels, airports, sea ports, railway stations, and others.
7. Any other establishment, activity or project liable to have a noticeable impact on the environment and for which a decree shall be issued by the EEAA with the agreement of the competent administrative body.

**SECOND: LOCATION:**

These include establishments set up on the banks of the Nile, its branches or the main canals, as well as those operating in touristic areas and antiquities sites, in densely-populated areas, on the shores of seas and lakes or in the nature reserves.

**THIRD: EXTENT OF DEPLETION OF NATURAL RESOURCES**

These include establishments which cause the denudation of agricultural land, desertification, destruction of trees and palm trees, or the pollution of water resources, especially the River Nile, its branches, the lakes, or underground water.

**FOURTH: TYPE OF ENERGY USED**

1. Fixed establishments which use thermal fuel and whose emissions exceed the permissible levels.
2. Establishments using nuclear fuel for their operation.

**ANNEX (3)****MODEL REGISTER OF IMPACT OF ESTABLISHMENT  
ACTIVITIES ON THE ENVIRONMENT (ENVIRONMENTAL CONDITION  
REGISTER)**

1. Name and address of establishment
2. Name and job title of person in charge of filling in the Register.
3. Period covered by the current data.
4. Type of activity and nature of raw materials and production during the corresponding time period.
5. Laws governing the establishment.
6. Special conditions set by the EEAA for the establishment.
7. Statement of the types of emissions, the rates of discharge (per hour/ day/ month/ year), and method of disposal thereof.
 

7/1	-	Gaseous
7/2	-	Liquid
7/3	-	Solid
7/4	-	Others
8. Rates at which tests are conducted on each type of emission emanating from the establishment.
 

<u>8/1</u>	<u>Random samples [experimental]</u>
*	Date, time and place of each sample.
*	Rate of sample collection.
*	Indicators requiring to be measured (daily/ weekly/ monthly).
<u>8/2</u>	<u>Samples of compound wastes</u>
*	Date and time of sample collection.
*	Places of mixing and percentages of mixture in the compound sample.
*	Indicators requiring to be measured (daily/ weekly/ monthly).
9. Extracted materials after treatment processes.
10. Extent of efficiency of treatment method.
11. Date and signature of officer in charge.

**ANNEX (4)****WILD BIRDS AND ANIMALS, PROHIBITED FROM BEING HUNTED,  
KILLED OR CAPTURED****FIRST:**

- A. The birds and animals listed in the table attached to the Minister of Agricultural Decree No. 28 of 1967, issued in implementation of the provisions of article 117 of Agriculture Law No. 53 of 1966.
- B. Any other birds or animals determined in the international conventions to which the Arab Republic of Egypt adheres.
- C. Any other birds or animals designated in a decree to be issued by the Minister of Agriculture in agreement with the EEAA.

**SECOND: REGIONS IN WHICH HUNTING OF SUCH BIRDS AND ANIMALS IS PROHIBITED:**

- A. The regions designated in the Minister of Agriculture Decree No. 472 of 1982: It is prohibited to hunt any species of birds and animals in the following areas in the two governorates in Sinai:
  - El Zalaniq, Sabkhet El Bardaweel, and El Tinah.
  - St. Catherine and Mount Serial.
  - Tiran Island.

Bird hunting, fishing or removing sea shells, coral reefs, oysters and other marine creatures, whether by trawling or hacking, are prohibited in the area lying between Taba and Ras Mohamed on the Gulf of Aqaba.
- B. Nature Reserves as defined in prime ministerial decrees issued in implementation of Law No. 102 of 1983.
- C. Rules of hunting in North Sinai issued by the Governor's Decree No. 442 of 1980.
- D. Rules of hunting in South Sinai issued by the Governor's Decrees No. 15 of 1980 and No. 16 of 1980.
- E. Regions designated in the international conventions to which the Arab Republic of Egypt adheres.
- F. Any other regions determined in a decree of the competent authority in coordination with the EEAA.

**ANNEX (5)****MAXIMUM LIMITS OF OUTDOOR AIR POLLUTANTS**  
**(MICROGRAM PER CUBIC METER)**

<b>POLLUTANT</b>	<b>MAXIMUM LIMIT</b>	<b>EXPOSURE PERIOD</b>
Sulphur Dioxide	350	1 hr
	150	24 hrs
	60	1 year
Carbon Monoxide	30 Milligrams/cubic meter	1 hr
	10 Milligrams/cubic meter	8 hr
Nitrogen Dioxide	400	1 hr
	150	24 hrs
Ozone	200	1 hr
	120	8 hr
Suspended Particles Measured as Black Smokes	150	24 hrs
	60	1 year
Total Suspended Particles (TSP)	230	24 hrs
	90	1 year
Respirable Particles (Pm 10)	70	24 hrs
Lead	1	1 year

**ANNEX (6)****PERMISSIBLE LIMITS OF AIR POLLUTANTS IN EMISSIONS**

Air pollutants in this context are gaseous, solid, liquid or steam pollutants emitted by various establishments within given periods and likely to impact adversely on public health, animals, plants, material, or property, or to interfere with person's exercise of his daily life. Accordingly, if the emission of these pollutants results in the presence of concentrations thereof in excess of the maximum permissible limits for outdoor air, they shall be considered air pollutants.

**TABLE (1)**  
**OVERALL PARTICLES**

<b>S. No.</b>	<b>Kind of Activity</b>	<b>Maximum Limit for Emissions (mg/m<sup>3</sup> from Exhaust)</b>
1.	Carbon Industry	50
2.	Coke Industry	50
3.	Phosphates Industry	50
4.	Casting and extraction of lead, zinc, copper, and other non-ferrous metallurgical industries.	100
5.	Ferrous Industries	200 Existing 100 New
6.	Cement Industry	500 Existing 200 New
7.	Synthetic woods and fibers	150
8.	Petroleum and Oil Refining Industries.	100
9.	Other Industries	200

**TABLE (2)**  
**MAXIMUM LIMITS OF GAS AND FUME**  
**EMISSIONS FROM INDUSTRIAL ESTABLISHMENTS**

	<b>Pollutant</b>	<b>Maximum Limit for Emissions (mg/m<sup>3</sup> from exhaust)</b>
*	Aldehydes (measured as Formaldehyde)	20
*	Antimony	20
*	Carbon Monoxide	500 Existing 250 New
*	Sulphur Dioxide	
	Burning Coke and Petroleum	4000 Existing 2500 New
	Non-ferrous Industries	3000
	Sulphuric Acid Industry & other sources	1500
*	Sulphur trioxide in addition to sulphuric acid	150
*	Nitric Acid	
*	Nitric Acid Industry	2000
*	Hydrochloric Acid (Hydrogen Chloride)	100
*	Hydrofluoric Acid (Hydrogen Fluoride)	15
*	Lead	20
*	Mercury	15
*	Arsenic	20
*	Heavy elements (total)	25
*	Silicon Fluoride	10
*	Fluorine	20

	<b>Pollutant</b>	<b>Maximum Limit for Emissions (mg/m<sup>3</sup> from exhaust)</b>
*	Tar	
	Graphite Electrodes Industry	50
*	Cadmium	10
*	Hydrogen Sulphide	10
*	Chlorine	20
*	Carbon	
	Garbage Burning	50
	Electrodes Industry	250
*	Organic Compounds	
	Burning of organic liquids	50 0.04% of crude (oil refining)
*	Copper	20
*	Nickel	20
	Nitrogen Oxides	
	Nitric Acid Industry	3000 Existing 400 New
	Other sources	300



**ANNEX (7)**  
**PERMISSIBLE LIMITS OF SOUND INTENSITY**  
**AND PERIODS OF SAFE EXPOSURE THERETO**

**TABLE (1)**

**Intensity of sound inside the work place**  
**and closed places: \***

**Maximum permissible noise levels inside places**  
**of productive activities:**

No.	TYPE OF PLACE AND ACTIVITY	MAXIMUM PERMISSIBLE NOISE [level equivalent to decibel (A)]
1.	Work place with up to 8 hour shifts and aiming to limit noise hazards on sense of hearing	90
2.	Work place where acoustic signals and good audibility are required	80
3.	Work rooms for the follow up, measurement and adjustment of high performance operations	65
4.	Work rooms for computers, typwriters or similar equipment	70
5.	Work rooms for activities requiring routine mental concentration	60

Maximum permissible period for exposure to noise in the work place (factories and workshops):

- \* The value given hereafter is indicated on the basis of not affecting the sense of hearing.
- Intensity of noise shall not exceed 90 decibels (A) during a daily 8-hour work shift.
  - In case of increasing noise level intensity over 90 dB (A), the period of exposure must be reduced according to the following table:

Noise intensity level decibel (a)	95	100	105	110	115
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Period of exposure (one hour)	4	2	1	1/2	1/4

- The instantaneous noise intensity level during the working hours shall not exceed 135 decibels.
- In case of exposure to different noise intensity levels of over 90 decibels:
  - (1) For intermittent periods during a shift, the result must not exceed:

$$\left( \frac{A_1}{B_1} + \frac{A_2}{B_2} + \dots \right) \text{ over the integer one}$$

whereas:

A the period of exposure to a specific level of noise (hour).

B the permissible period of exposure at the same noise level (hour)

- In case of exposure to intermittent noise emanating from sledgehammers:

Depends on the exposure period (number of impacts during the daily shift) according to noise intensity as per the following table:

Noise intensity (Decibel)	Number of permissible impacts during the daily working hours
135	300
130	1000
125	3000
120	10000
115	30000

Noise issuing from sledgehammers shall be considered intermittent if the period between impacts is one second or more. If the period is less, the noise shall be considered continuous and subject to the preceding four items.

**TABLE (2)**

**The maximum permissible limit for noise intensity in the different areas:**

TYPE OF AREA	PERMISSIBLE LIMIT FOR NOISE INTENSITY DECIBEL (a)					
	DAY		EVENING		NIGHT	
	From	To	From	To	From	To
Commercial, administrative and downtown areas	55	65	50	60	45	55
Residential areas in which can be found some workshops or commercial establishments or which are located on a main road	50	60	45	55	40	50
Residential areas in the city	45	55	40	50	35	45
Residential suburbs with low traffic	40	50	35	45	30	40
Residential rural areas, hospitals and gardens	35	45	30	40	25	35
Industrial areas (heavy industries)	60	70	55	65	50	60

Day                    from 7 a.m. to 6 p.m.

Evening              from 6 p.m. to 10 p.m.

Night                 from 10 p.m. to 7 a.m.

**ANNEX (8)**  
**MAXIMUM LIMITS OF AIR POLLUTANTS INSIDE**  
**THE WORK PLACE ACCORDING TO TYPE OF INDUSTRY**

Threshold Limits are the concentrations of airborne chemical substances to which workers can be exposed day after day without adverse effects to their health and are divided into three kinds:

1- Threshold Limits – Mean time

Is the average time of an ordinary working day (8 hours) to which the worker may be exposed for 5 days a week throughout the period of his employment without suffering any damage to his health.

2- Threshold Limits - Limits of exposure for a short period

They are the limits to which the workers may be continuously exposed for a short period.

The threshold limits for short periods, are the limits of exposure for an average period of 15 minutes and which may not be exceeded under any circumstances during the working period. The period of exposure may not exceed 15 minutes nor be repeated more than four times during the same day. The period between each short exposure and the next must be at least sixty minutes.

3- The ceiling limit which may not be exceeded even for a moment. When absorption through the skin is a factor in increasing exposure, the sign "+ skin" shall be placed before the critical threshold. With respect to dust that merely causes annoyance without having tangible harmful health effects, the threshold limits shall be 10 milligrams/cubic metre for inhalable particles.

Concerning simple asphyxiate gases which have no significant physiological effects, the decisive factor shall be the concentration of oxygen in the atmosphere which may not be less than 18%.

Substance	Threshold Limits				Remarks
	Mean time		Limits of exposure for a short period		
	Part per million P.P.M	mg/m <sup>3</sup>	Part per million P.P.M	mg/m <sup>3</sup>	
Acetaldehyde	100	180	150	270	
Acetic Acid	10	25	15	37	
Acetic Anhydride	5	20			+ SKIN
Acetone	750	1780	1000	2375	
Acetonitrile	40	70	60	105	+ SKIN
Tetrabromide Acetylene	1	15	1.5	20	
Acetyl Salicylic Acid (Aspirin)		5			
Acrolein	0.1	0.25	0.3	0.8	
Acrylamide		0.3		0.6	+ SKIN
Acrylic Acid	10	30			
Acrylonitrile	2				+ SKIN
Alderine		0.25		0.75	+ SKIN
Allyl Alcohol	2	5	4	10	+ SKIN
Allyl Chloride	1	3	2	6	
Aluminium Metal and Oxides	10		20		
Pyro Powders	5				
Soldering Smoke Fumes	5				
Soluble Salts	2				
Alkylates	2				
Aminopyridine	5.5	2	2	4	
Ammonia	25	18	35	27	
Ammonium Chloride (Fume)					
n-Amyl Acetate	100	530	150	800	
sec-Amyl Acetate	125	670	150	800	
Aniline and Similar	2	10	5	20	+ SKIN
Antimony and Its Compounds (Counted as antimone)		0.5			

Substance	Threshold Limits				Remarks
	Mean time		Limits of exposure for a short period		
	Part per million P.P.M	mg/m <sup>3</sup>	Part per million P.P.M	mg/m <sup>3</sup>	
ANTU ( Alpha Naphtyl Thiourea )		0.3		0.9	
Arsenic and Its Soluble Compounds (Counted as Arsenic)		0.2			
Arsine Gas	0.05	0.2			
Petroleum asphalt Fumes		5		10	
Atrazine		5			
Methyl Azynphos		0.2		0.6	+ SKIN
Barium and Its Soluble Compounds (Counted as Barium)		0.5			
Benzene (Petrol)	10	30	25	75	
Benzyl Chloride	1	5			
Beryllium		0.002			
Diphenyl	0.2	1.5	0.6	4	
Bismuth Telluride	10		20		
Sodium tetra borate (Anhydrous )		1			
Sodium tetra borate (Decahydrate)		5			
Sodium tetra borate (Pentahydrate)		1			
Boron Oxide		10		20	
Boron Tribromide	1	10	3	30	
Boron Trifluoride	1	3			+ CEILING
Bromine	0.1	0.7	0.3	2	
Bromine pentafluoride	0.1	0.7	0.3	2	
Bromoform	0.5	5			

Substance	Threshold Limits				Remarks
	Mean time		Limits of exposure for a short period		
	Part per million P.P.M	mg/m <sup>3</sup>	Part per million P.P.M	mg/m <sup>3</sup>	
Butadiene	1000	2200	1250	2750	
Butane	800	1100			
n-Butyl Acetate	150	710	200	150	
sec- Butyl Acetate	200	950	250	1190	
tert-Butyl Acetate	200	950	250	1190	
Butyl Acrylate	10	55			
n-Butyl Alcohol	50	150			+ SKIN
sec- Butyl Alcohol	100	305	150	450	
tert- Butyl Alcohol	100	300	150	450	
Butyl Amines	5	15			+ SKIN
Tetra Butyl Chromate Counted as Chromium Oxide(CrO <sub>3</sub> )		0.1			+ SKIN CEILING
Butyl Lactate	5	25			
Butyl Mercaptan	0.5	1.5			
Cadmium Dusts and Salts (Counted As Cadmium)	0.05		0.2		
Cadmium Smokes	0.05				CEILING
Calcium Carbonate				20	
Calcium Hydroxide		5			
Calcium Oxide		2		10	
Carbaryl		5		10	
Carbofuran		0.1			
Carbon Black		3.5		7	
Carbon Dioxide	5000	9000	15000	27000	
Carbon Disulphide	10	30			+ SKIN
Carbon Monoxide	50	55	400	440	
Carbon Tetra Chloride	5	30	20	125	

Substance	Threshold Limits				Remarks
	Mean time		Limits of exposure for a short period		
	Part per million P.P.M	mg/m <sup>3</sup>	Part per million P.P.M	mg/m <sup>3</sup>	
Carbon Tetra Bromide	0.1	1.4	0.3	4	
Chlordane		0.5		2	+ SKIN
Chlorinated Camphene		0.5		1	+ SKIN
Chlorinated Diphenyl Oxide		0.5		2	
Chlorine	1	3	3	9	
Chlorine Dioxide	0.1	0.3	0.3	0.9	
Chloro Acetaldehyde	1	3			CEILING
Chlorobenzene	75	350			
Chlorodiphenyl (42%)		1		2	
Chlorodiphenyl (45%)		0.5		1	
Chloroform	10	50	50	225	
Di (chloromethyl ) Ether	0.001	0.005			
Chloropicrin	10	45			
Chlorpyrifos		0.2		0.6	+ SKIN
Chromium and Its Compounds (Counted on The Basis of Chromium)		0.5			
Hexavalent Chromium Compounds (Counted on The Basis of Chromium)		0.05			
Volatile Coal Tar Products Which Are Soluble In Benzene		0.2			
Cobalt and its Dust and Smokes		0.1			
Copper Smokes		0.2			
Copper Dust and Sprinkles (Counted as Copper)		1		2	
Raw Cotton Fluff		0.2		0.6	
Cresoles	5	22			+ SKIN



Substance	Threshold Limits				Remarks
	Mean time		Limits of exposure for a short period		
	Part per million P.P.M	mg/m <sup>3</sup>	Part per million P.P.M	mg/m <sup>3</sup>	
Cyanide Salts, Counted as Cyanide		5			SKIN
Cyanogen	10	20			
Cyanogen Chloride	0.3	0.6			CEILING
Cyclohexane	300	1050	375	1300	
Cyclopentadiene	75	200	150	400	
Cyclopentane	600	1720	900	2580	
D.D.T		1		3	
Decaborane	0.05	0.3	0.15	0.9	SKIN
Diazinon		0.1		0.3	+ SKIN
Diazomethane	0.2	0.4			
Diborane	0.1	0.1			
Dichloro acetylene	0.1	04			CEILING
o-Dichlorobenzene	50	300			CEILING
para - Dichlorobenzene	75	450	110	675	
1, 2 - Dichloro ethylene	200	790	250	1000	
Dichloroethyl ether	5	30	10	60	+ SKIN
Dichlorvos	0.1	1	0.3	3	+ SKIN
Dichrotofos		0.25			+ SKIN
Dieldrin		0.25		0.75	+ SKIN
Diethanolamine	3	15			
Dimethylaniline	5	25	10	50	+ SKIN
Dinitrobenzene	0.15	1	0.5	3	+ SKIN
Dinitro- O - Cresol		0.2		0.6	+ SKIN
Dinitrotoluene		1.5		5	+ SKIN
Dioxin	25	90	100	360	+ SKIN

Substance	Threshold Limits				Remarks
	Mean time		Limits of exposure for a short period		
	Part per million P.P.M	mg/m <sup>3</sup>	Part per million P.P.M	mg/m <sup>3</sup>	
Dipropylene Glycol Methyl Ether	100	600	150	900	+ SKIN
Diquat		0.5		1	
Disulfiram		2		5	
Endosulfan		0.1		0.3	+ SKIN
Endrin		0.1		0.3	+ SKIN
Epichlorohydrin	2	10	5	20	+ SKIN
Ethyl Acetate	400	1400			
Ethanol	1000	1900			
Ethanolamine	3	8	6	15	
Ethylbenzene	100	435	125	545	
Ethyl butyl ketone	50	230	75	345	
Ethyl chloride	1000	2600	1250	3250	
Ethylene diamine	10	25			
Ethylene oxide	10	20			
Ethylene dichloride	10	40	15	60	
Ethylene glycol ( particles )		10		20	
Ethylene glycol (Vapour)	50	125			Ceiling
Ethyl mercaptan	0.5	1	2	3	
Ferro vanadium Dust		1		0.3	
fibrous Glass Dust		10			
Fluorides (Counted on The Basis of Fluorine)		2.5			
Fluorine		2	2	4	CEILING
Formaldehyde	2	3			CEILING
Formic Acid	5	9			

Substance	Threshold Limits				Remarks
	Mean time		Limits of exposure for a short period		
	Part per million P.P.M	mg/m <sup>3</sup>	Part per million P.P.M	mg/m <sup>3</sup>	
Gasoline	300	900	500	1500	
Heptachlor		0.5		2	+ SKIN
Heptane	400	1600	500	2000	
Hexachloro Cyclopentadiene	0.01	0.1	0.03	0.3	
Hexachloro-Naphthalene		0.20		0.60	+ SKIN
n- Hexane	50	180	1000	3600	
Hexane Isomers	500	1800	1000	3600	
Hydrogen Bromide	3	10			
Hydrogen Cyanide	10	10			CEILING
Hydrogen Fluoride	3	2.5	6	5	
Hydrogen Sulphide	10	14	14	21	
Iodine	0.1	1			CEILING
Iron Oxide Smokes	3	5		10	
Iron Pentacarbonyl	0.1	0.8	0.2	0.16	
Isobutyl Alcohol	50	150	75	225	
Isopropyl Alcohol	400	980	500	1225	
Lead Dust and Smokes Non Organic (as Lead)		0.15		0.45	
Lead Arsenate		0.15		045	
Lead Chromate		0.05			
Lindane		0.5		0.5	+ SKIN
Liquified Petroleum Gases	1000	1800	1250	2250	
Magnesium Oxides Smokes		10			
Malathion		10			+ SKIN
Manganese Dusts and Compounds (as Manganese)		5			CEILING
Manganese Smokes		1		3	

Substance	Threshold Limits				Remarks
	Mean time		Limits of exposure for a short period		
	Part per million P.P.M	mg/m <sup>3</sup>	Part per million P.P.M	mg/m <sup>3</sup>	
Mangnese Tetra Oxide		1			
Mercury (as Mercury)					+ SKIN
Alkyl Compounds		0.01		0.03	
Smokes Of All Other Compounds Except Alkyl		0.05			
Aryl Compounds and Inorganic Compounds		0.1			
Methomyl		2.5			+ SKIN
Methoxychlor		10			
Methyl Alcohol	200	260	250	310	+ SKIN
Methyl Bromide	5	20	15	60	
Methyl butyl ketone	5	20			
Methyl chloride	50	105	100	205	
Methyl chloroform	350	1900	450	2450	
Diphenylmethane Diisocyanate (MDI)	0.02	0.2			CEILING
Methylene Chloride	100	360	500	1700	
Methyl Ethyl Ketone	200	590	300	885	
Methyl Hydrazine	0.02	0.35			+ SKIN
Methyl Isocyanate	0.02	0.05			+ SKIN
Methyl Mercaptan	0.5	1			
Methyl Parathion		0.2		0.6	+ SKIN
Mevinphos	0.01	0.1	0.03	0.3	+ SKIN
Monocrotophos					
Naphthalene	10	50	15	75	
Nickel Carbonyl (as Nickel)	0.05	0.53			
Nickel Metal		1			
Soluble Compounds (as Nickel)		0.1		0.3	
Nicotine		0.5		1.5	+ SKIN

Substance	Threshold Limits				Remarks
	Mean time		Limits of exposure for a short period		
	Part per million P.P.M	mg/m <sup>3</sup>	Part per million P.P.M	mg/m <sup>3</sup>	
Nitric Acid	2	5	4	10	
Nitric Oxide	25	30	35	45	
Para Nitroaniline		3			+ SKIN
Nitrobenzene	1	5	2	10	+ SKIN
Nitro Chlorobenzene		1		2	+ SKIN
Nitrogen Dioxide	3	6	5	10	
Nitrogen Trifluoride	10	30	15	45	
Nitroglycerin	0.02	0.2	0.05	0.5	+ SKIN
Nitrotoluene	2	11			+ SKIN
Octachloronaphthalene		0.1		0.3	+ SKIN
Mineral Oil Sprinkles		5		10	
Osmium Tetraoxide (as Osmium)	0.0002	0.002	0.0006	0.006	
Oxalic Acid		1		2	
Oxygen Difluoride	0.05	0.1	0.15	0.3	
Ozone	0.1	0.2	0.3	0.6	
Paraffin Wax Vapours		2		6	
Paraquat (Size of Inhalable Particles)		0.1			
Parathion		0.1		0.3	+ SKIN
Pentachloronaphthalene		0.5		2	
Pentachlorophenol		0.5		1.5	+ SKIN
Ethylene Dichloride	50	325			
Phenol	5	19	10	38	+ SKIN
Phenothiazine		5		10	+ SKIN
Para-Phenylene Diamine		0.1			+ SKIN
Phenylhydrazine	5	20	1	45	+ SKIN

Substance	Threshold Limits				Remarks
	Mean time		Limits of exposure for a short period		
	Part per million P.P.M	mg/m <sup>3</sup>	Part per million P.P.M	mg/m <sup>3</sup>	
Phenyl Mercaptan	0.5	2			
Phosgene	0.1	0.4			
Phosphine	0.3	0.4	1	1	
Phosphoric Acid		1		3	
Yellow Phosphorus		0.1		0.3	
Picric Acid		0.1		0.3	+ SKIN
Platinum Metal		1			
Soluble Platinum Salts (as Platinum)		0.002			
Potassium Hydroxide		2			CEILING
Propionic Acid	10	30	15	45	
Propyl Alcohol	200	500	250	625	+ SKIN
Pyrethrum		5		10	
Pyridine	5	15	10	30	
Rotenone		5		10	
Selenium Salts (as Selenium)		0.2			
Selenium Hexafluoride	0.05	0.2			
Silicon				20	
Silicon Carbide				20	
Silver Metal		0.1			
Soluble Silver Salts		0.01			
Sodium Azide	0.1	0.3			CEILING
Sodium Bisulfite		5			
Sodium Fluoroacetate		0.05		0.15	+ SKIN
Sodium Hydroxide		2			CEILING
Sodium Metabisulfite		5			

Substance	Threshold Limits				Remarks
	Mean time		Limits of exposure for a short period		
	Part per million P.P.M	mg/m <sup>3</sup>	Part per million P.P.M	mg/m <sup>3</sup>	
Stibine	0.1	0.5	0.3	1.5	
Protein Decomposing Enzymes (100% Pure Crystalline Enzyme)		0.00006			CEILING
Sulphur Dioxide	2	5	5	10	
Sulphuric Acid		1			
Sulphur Hexafluoride	1000	6000	1250	7500	
Sulphur Monochloride	1	6	3	18	
Sulphur Pentafluoride	0.025	0.25	0.075	0.75	
2,4,5 – Trichlorophenoxy- Acetic Acid		10		20	
TEPP ( Tetra ethyl pyrophosphate )	0.004	0.05	0.01	0.02	+ SKIN
1,1,2,2, Tetrachloroethane	5	35	10	70	+ SKIN
Tetra Ethyl Lead (as Lead)		0.1		0.3	+ SKIN
Tetryl		1.5		3	+ SKIN
Soluble Thallium salts (as Thallium)		0.1			+ SKIN
Thiram		5		10	
Tin & Its Inorganic Compounds (Except Tin Tetra Oxide Counted as Tin)		2		4	
Tin Organic Compounds (as Tin)		0.1		0.2	+ SKIN
Titanium Dioxide				20	
Toluene	100	375	150	560	+ SKIN
Toluene Di-isocyanate	0.02	0.14			CEILING
o-toluidine	2	9			+ SKIN
Trichloroacetic Acid	1	5			
1,2,4, Trichlorobenzene	5	40			

Substance	Threshold Limits				Remarks
	Mean time		Limits of exposure for a short period		
	Part per million P.P.M	mg/m <sup>3</sup>	Part per million P.P.M	mg/m <sup>3</sup>	
Trichloroethylene	50	270	150	805	
Trichloronaphthalene		5		10	
2,4,6 – Trinitrotoluene		0.5		3	+ SKIN
Trimethylbenzene	25	125	35	170	
Triorthocresyl Phosphate		0.1		0.3	
Natural Uranium & Its soluble & insoluble Compounds (Counted as Uranium)		0.2		0.6	
Inhalable Vanadium Dusts & Smokes (Counted as Vanadium PentaOxide)		0.5			
Vinyl Chloride	5	10			
Warfarin		0.1		0.3	
Soldering Smokes		5			
Solid Timber Dusts		1			
Soft Timber Dusts		5		10	
Xylene	100	435	150	655	+ SKIN
Zinc Chloride Smokes		1		2	
Zinc Oxide Smokes		5		10	
Zirconium Compounds (Counted as Zirconium)		5		10	



**THRESHOLD LIMITS OF  
EXPOSURE TO MINERAL DUSTS**

**1- SILICA - SILICON DIOXIDE:**

**A- CRYSTALLIZED:**

Quartz: Threshold limits (million particles per cubic foot)

$$= \frac{300}{\text{Percentage of Quartz Concentration in dust} + 10}$$

Threshold limits of Inhalable dusts (LESS THAN 5 MICRONS)  
(mg/m<sup>3</sup>)

$$= \frac{10 \text{ mg/m}^3}{\text{Percentage of Quartz Concentration in dust} + 2}$$

Threshold limits of total dust (mg/m<sup>3</sup>)

$$= \frac{30 \text{ mg/m}^3}{\text{Percentage of Quartz Concentration in dust} + 3}$$

CRISTOBALITE AND TRIDYMITE : Half the value calculated for  
Quartz shall be used.

**B- UNCRYSTALLIZED SILICA**

Threshold limits                      20 Million particles per cubic foot

**2- ASBESTOS:**                      Asbestos dusts with fibers lengths of more than 5 microns.

AMOSITE                                  0.5 of fibers per cm<sup>3</sup> of air  
CROCIDOLITE                              0.2 of fibers per cm<sup>3</sup> of air  
OTHER KINDS                              2 of the fibers per cm<sup>3</sup> of air

**3- TALC:**

FIBROUS TYPE:                          2 fibers per cm<sup>3</sup> of air  
NON FIBROUS TYPE:                      20 million particles per cubic foot of air

**4- MICA:**                                  20 million particles per cubic foot of air

**5- NATURAL GRAPHITE:**              15 million particles per cubic foot of air

- 6- **COAL: Inhalable Dusts:**  
(provided that percentage of silica is less than 5%)

$$= 20 \text{ million particles per cubic foot of air}^{(3)}$$

**If the percentage of SILICA is more than 5%**

$$= \frac{10 \text{ mg/m}^3}{\text{Percentage of Silica in Inhalable dust} + 2}$$

**Threshold limits for dust which only cause annoyance**

(Less than 1% quartz) Threshold limits for total dust

$$= 30 \text{ million particles /cubic foot}$$

$$= 10 \text{ mg/m}^3$$

$$\begin{array}{l} \text{Threshold limits} \\ \text{for inhalable dusts} \end{array} = 5 \text{ mg/m}^3$$

**If the percentage of quartz exceeds 1%, the Threshold limits for quartz is applicable.**

EXAMPLES:

Among the dust that only causes annoyance:

- ALUMINA
- CALCIUM CARBONATE
- MARBLE/LIMESTONE
- CALCIUM SILICATE
- PORTLAND CEMENT
- SYNTHETIC GRAPHITE
- GYPSUM - CALCIUM SULPHATE
- MAGNESIUM SULPHATE
- KAOLINE
- METALLURGICAL WOOL FIBERS
- ZINC OXIDE
- CELLULOSE FIBRES
- SPRINKLES OF VEGETABLE OILS - EXCEPT IRRITATING OILS

Threshold limits for raw cotton fluff:

$$\text{Threshold limits- mean time} = 0.2 \text{ mg/m}^3$$

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<sup>(3)</sup> Million particles in a cubic foot x 35.5 = a Million particles per cubic metre = One particle per cubic centimeter

Threshold limits - for short exposure = 0.6 mg/m<sup>3</sup>

**THRESHOLD LIMITS FOR CARCINOGENS  
AND SUSPECTED CARCINOGENS**

Substance	Threshold Limits	Remarks
Acrylonitrile	2 ppm	+ Skin
Asbestos	See mineral dusts	
Perchloro Methyl Ether	0.001 ppm	
Chromate (Clearing Chromate Ore)	0.05 mg/m <sup>3</sup> (as Chromium)	
Hexavalent Chromium -Some Compounds Which Are Non-Soluble In Water	0.05 mg/m <sup>3</sup> (as Chromium)	
Volatile Materials In Coal Tar	0.2 mg/m <sup>3</sup> (As Materials soluble in benzene)	
Nickel Dusts and Fumes (Nickel Sulphide Roasting)	0.1 mg/m <sup>3</sup> (As Nickel)	
Vinyl Chloride	5 ppm	
Benzene	10 ppm	
Beryllium	2 Microgrammes/ m <sup>3</sup>	
Carbon Tetrachloride	5 ppm	+ Skin
Chloroform	10 ppm	
Hydrazine	0.1 ppm	+ Skin
Phenyl Hydrazine	5 ppm	+ Skin
1,1-Dimethyl Hydrazine	0.5 ppm	+ Skin
Methyl Hydrazine	0.2 ppm	+ Skin - Ceiling
Dimethyl Sulphate	0.1 ppm	+ Skin
Ethylene Oxide	1 ppm	
Formaldehyde	1 ppm	Ceiling
Hexa Chlorobutadiene	0.02 ppm	
Methyl Iodide	2 ppm	+ Skin
2-Nitropropane	10 ppm	
Beta Propio Lactone	0.5 ppm	
Propyl Amine	2 ppm	+ Skin
Orthotoluidine	2 ppm	+ Skin
Vinyl Bromide	5 ppm	
Vinyl Cyclohexene Dioxide	10 ppm	

**CARCINOGENIC SUBSTANCES WITH NO KNOWN THRESHOLD LIMITS WHICH WORKERS ARE NOT ALLOWED TO TOUCH OR BECOME EXPOSED TO IN ANY WAY**

**4- Octaphenyl Amino (Paraseny Amino)**

Benzidine  
Chloromethyl Ether  
Beta Naphthyl Amine

**5- Nitro Diphenyl**

INDUSTRIAL MATERIALS OR PROCESSES SUSPECTED OF BEING CARCINOGENIC:

AMETRYN

PRODUCTION OF ANTIMONY TRIOXIDE

PRODUCTION OF ARSENIC TRIOXIDE

BENZO (A) PYRENE

PRODUCTION OF CADMIUM OXIDE

3,3 - DICHLORO BENZEDINE

DIMETHYL CARBAYMYL CHORIDE

ETHYLENE DIBROMIDE

HEXAMETHYL PHOSPHORIC TRI AMIDE

N- NITROSO DIMETHYL AMINE

N- PHENYL -BETA- NAPHTHYLAMINE

**VENTILATION IN WORK PREMISES:**

Aims at maintaining the concentration of pollutants below maximum permissible limits. The provision of adequate ventilation inside work premises shall be effected in one of two ways:

- 1- General ventilation
- 2- Local ventilation

**1- GENERAL VENTILATION:**

It is a suitable method for treatment of low toxicity solvent fumes. It is not suitable for high toxicity substances, nor pollutants which are irregularly emitted or in large quantities. It is not generally suitable for dealing with dust and fumes.

The general ventilation system shall be computed after identifying the volume of evaporated substances and computing the required volume of

the air that needs to be moved in order to cause the change of air sufficient for maintaining the concentration of the pollutant substance below the maximum permissible limits.

The technical engineering aspects shall be taken into consideration when establishing the ventilation system. A specialized engineer shall supervise the execution of this system guided by the recommendations set forth in the following reference book: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, COMMITTEE ON VENTILATION, INDUSTRIAL VENTILATION. A MANUAL OF RECOMMENDED PRACTICE, 13TH ED. AACGIH, Lansing, MI, 1974.

## **2- LOCAL VENTILATION:**

It is more effective for controlling the different types of pollutants. It consists of a hood, a set of pipes, a purifying apparatus to clear the air before its emission outside the location, and a fan to circulate the air.

Whatever the design of the hood, the speed of air at the pollution point source must be enough to remove it before it is dispersed in the work premises.

Technical and engineering aspects should be taken in consideration in designing the local ventilation system. Execution of the system must be supervised by a specialized engineer making use of the above mentioned reference for general ventilation.

Whenever general and local ventilation systems are used, maintenance should be supervised periodically by a specialized engineer and efficiency should be assessed out during periodic maintenance.

**ANNEX (9)**  
**UPPER AND LOWER LIMITS FOR DEGREES OF TEMPERATURE AND HUMIDITY, THE PERIOD OF EXPOSURE THERETO AND THE MEANS OF PROTECTION THEREFROM**

- 1- Workers shall not be exposed during two working hours on any one full working day to conditions of severely high temperature, as indicated in the table and as measured with a moistened black thermometer:

<b>TYPE OF WORK</b>	<b>LOW AIR VELOCITY</b>	<b>HIGH AIR VELOCITY</b>
Light work	308 centigrade	32.28 centigrade
Medium work	27.88 centigrade	30.58 centigrade
Hard work	26.18 centigrade	28.98 centigrade

- 2- A worker may not be made to work wprecautionary supervision when exposed to high temperature levels.
- 3- If any worker is exposed for a period of one continuous or intermittent hour during two working hours to working conditions of extreme temperature in excess of 26.18 centigrade for men and 24.58 centigrade for women, one or more of the following methods shall be used to ensure that the worker's internal temperature does not rise above 388 centigrade.
- (A) Acclimatizing the worker to the temperature over a period of six days by exposing him/her to 5% of the daily exposure period on the first working day then increasing the period of exposure by 10% a day until it reaches 100% on the sixth day.
- (B) A worker who absents himself for a period of nine days or more after the acclimatization process or who falls ill for a period of four consecutive days must be re-acclimatized over a period of four days by being exposed to 50% of the daily exposure period on the first day and an additional 20% a day thereafter so as to reach 100% exposure on the fourth day.
- 4- Organizing working hours to reduce the physiological stress on the worker and enable him to get adequate rest between the working hours.
- 5- Distributing the total period of work evenly on the same day.
- 6- Scheduling work so that jobs exposed to high temperatures are slotted into the coolest periods of the day.
- 7- Scheduling short rest breaks at least once every hour to enable workers to drink a saline solution. Each worker shall be given a minimum of 2 litres of potable

water in which 0.1% salt is dissolved (without giving salt pills), and the water supply must not be further than 60 metres from the workers.

- 8- Providing and using suitable protective clothing and equipment.
- 9- Adopting all engineering precautions and designs, and applying engineering control and execution methods to reduce air temperature.

#### **MEDICALLY:**

- Conducting medical examinations on workers exposed to high temperatures to ascertain their tolerance levels, checking in particular their cardio -vascular, respiratory and urinary systems, [liver, endocrine glands, skin and medical history, especially in regard to heat-related diseases.
- Conducting periodic check-ups every two years for workers under the age of 46 who are exposed to high temperature and every year for older workers.
- Presence of a trained health worker to observe and confront cases and diseases resulting from heat during work, in addition to the availability of first aid facilities.

#### **TRAINING:**

Workers who are exposed to high temperatures must be informed of the following:

- 1- Importance of drinking water during work.
- 2- Importance of taking salts.
- 3- Importance of daily weighing of the body before starting work and at the end of duty.
- 4- The symptoms of the main diseases connected with heat exposure, e.g. dehydration, drowsiness, exhaustion and cramps resulting from heat.
- 5- Dangers of any toxic substances or other physical hazards to which the worker is exposed.
- 6- The importance of heat acclimatization (while recording the data concerning each worker in a special file easily accessible to the worker).

#### **Monitoring:**

- 1- Placing a wet bulb thermometer (ordinary mercury thermometer with the mercury reservoir wrapped in moistened gauze) in hot work places.
- 2- Using the black GLOB thermometer (mercury thermometer with the mercury reservoir wrapped in black metal) in addition to the wet thermometer.
- 3- Waiting for half an hour before taking the reading of each thermometer.
- 4- Determining the black wet temperature degree from the equation:

Black wet thermometer temperature degree =  $0.7 \times$  reading of wet thermometer  
 $+ 0.3 \times$  reading of GLOB thermometer

The following table may also be used, provided it is applied separately for each hour of work and that the aforementioned conditions are satisfied.

**SAFE STANDARDS OF TEMPERATURE DEGREES IN THE WORK  
 ENVIRONMENT FOR EACH WORKING HOUR**

<b>System of work and hourly rest break</b>	<b>Light work</b>	<b>Medium work</b>	<b>Hard work</b>
Continuous work	308 C	278C	258C
75% work, 25% rest	30.58C	288C	268C
50% work, 50% rest	31.58 C	29.58C	288C
25% work, 75% rest	328 C	318 C	308C

**In case of work under conditions of low temperature:**

In case it is necessary to work in conditions of low temperature suitable occupational safety measures must be taken, in terms of wearing respiration equipment to warm the inhaled air and using protective insulated clothing to maintain the workers' internal body temperature.



**ANNEX (10)**  
**NON-DEGRADABLE POLLUTING SUBSTANCES WHICH INDUSTRIAL ESTABLISHMENTS ARE PROHIBITED FROM DISCHARGING INTO THE MARINE ENVIRONMENT**

Non-degradable substances are those found in the environment for a long period depending basically on the quantities discharged into the marine environment, since some of them disintegrate after long periods ranging between a number of months and several years, according to the composition of these substances and their concentration in the environment.

**Non-Organic Substances:**

Examples:

MERCURY and its compounds  
 LEAD and its compounds  
 CADMIUM and its compounds  
 COBALT - VANADIUM - NICKEL - SELENIUM - ZINC AND its compounds

**Organic Substances:**

Examples:

- Organophosphorus Pesticides
- Dimethoate
- Malathion

**Very Small Quantities Which Disintegrate Within Some Months:**

- Organochlorine Pesticides
- Aldrin, Dieldrin, DDT
- Chloridane, Endrin

**Non-Degradable With Traces Continuing For Several Years:**

- Polychlorinated Biphenyls (PCBs)
- Aroclor 1254
- 2,3,6-Tri chlorobiphenyl

These substances are not completely degradable and are considered highly toxic in very low concentrations:

- Polynuclear Aromatic Hydrocarbons (PAH)
- Benzo (a) Pyrene
- Naphthalene

**Degradable, With Very Small Quantity Decomposed Over Years**

**Solid Substances:**

Examples:

Plastic - Fishing Nets - Ropes - Containers.