

EGYPT

PRIME MINISTER'S DECREE NO. 338 OF THE YEAR 1995

**PROMULGATING THE EXECUTIVE REGULATIONS OF THE
LAW FOR THE ENVIRONMENT**

LAW NO. 4 FOR 1994* **

The Prime Minister

After review of Law No. 4 of the year 1994, promulgating a Law concerning the Environment,
And after the presentation made by the competent Minister for Environmental Affairs, and after
consulting the Board of Directors of the Environmental Affairs Agency,
And after review by the State Council

Decreets

THE FIRST ARTICLE

THE PROVISIONS OF THE ATTACHED EXECUTIVE REGULATIONS FOR THE LAW FOR THE ENVIRONMENT PROMULGATED BY LAW NO. 4 OF THE YEAR 1994 SHALL COME INTO FORCE.

* Official Journal - Issue No. 51, 28 February, 1995, to come into force on March 1, 1995.

** Translation of the original Arabic text. In case of any questions, please refer to the original Law in Arabic.

*** Egyptian Environmental Affairs Agency, hereinafter referred to as EEAA.

THE SECOND ARTICLE

WITHOUT PREJUDICE TO THE PROVISIONS OF ARTICLE 1 OF THE AFOREMENTIONED LAW NO. 4 OF THE YEAR 1994, ESTABLISHMENTS WISHING TO EXTEND THE PRESCRIBED TIME LIMIT FOR MAKING REQUIRED ADJUSTMENTS ARE TO SUBMIT THEIR REQUESTS TO THE EEAA SIX MONTHS BEFORE THE EXPIRATION OF THE THREE YEAR PERIOD PRESCRIBED IN THE ABOVE MENTIONED ARTICLE. THESE REQUESTS ARE TO INCLUDE JUSTIFICATIONS FOR SUCH AN EXTENSION AND THE PROCEDURES TAKEN FOR THE IMPLEMENTATION OF THE PROVISIONS OF THE ATTACHED EXECUTIVE REGULATIONS.

THE EEAA IS TO VERIFY THE SUBMITTED DATA AND TO ASCERTAIN THE EXTENT OF AN ESTABLISHMENT'S WILLINGNESS TO IMPLEMENT THE PROVISIONS OF THESE EXECUTIVE REGULATIONS. THE EEAA IS TO SUBMIT A RELEVANT DETAILED REPORT, SUBSTANTIATED WITH DOCUMENTS, TO THE COMPETENT MINISTER FOR ENVIRONMENTAL AFFAIRS TO BE PRESENTED TO THE CABINET.

THE EEAA MAY, IN ITS PREPARATION OF THE REPORT, RESORT TO EXPERTS NOMINATED FOR THIS PURPOSE. IN THIS CASE THE APPLICANT REQUESTING THE EXTENSION IS TO BEAR THE COSTS ESTIMATED BY THE EEAA FOR THESE EXPERTS.

THE THIRD ARTICLE

THIS DECREE SHALL BE PUBLISHED IN THE OFFICIAL JOURNAL "ALWAKAAK-AL-MASRYA" AND SHALL COME INTO FORCE ON THE DATE FOLLOWING ITS PUBLICATION.

ISSUED IN THE CABINET ON 18 RAMADAN HEJIRA YEAR 1415 (CORRESPONDING TO 18 FEBRUARY, 1995).

**Prime Minister
Dr. Atef Sedki**

EXECUTIVE REGULATIONS FOR THE LAW FOR THE ENVIRONMENT

PRELIMINARY PART

CHAPTER ONE

GENERAL PROVISIONS

Article 1 The following terms and expressions shall be used when applying the provisions of these Executive Regulations:

1. **Water Polluting Substances:**

Any substances which, when discharged into water, whether intentionally or unintentionally, cause changes in its characteristics or contribute to these changes, whether directly or indirectly, to an extent that harms human beings or natural resources or sea water or are detrimental to tourist areas or interfere with other legitimate uses of the sea. The following are considered polluting substances:

- A- Oil or oil mixtures
- B- Harmful and hazardous residues noted in international conventions joined by the Arab Republic of Egypt
- C- Any other substances (solids - liquids - gases) noted in a decree issued by the competent Minister for Environmental Affairs
- D- Untreated industrial waste or liquids from industrial establishments
- E- Toxic military containers
- F- Other substances noted in the Convention and its annexes

CHAPTER TWO

EEAA

Article 2 The EEAA, established by virtue of Law No. 4 of the year 1994, is to replace the Agency established by Presidential Decree No. 631 of the year 1982, in all its rights and obligations. The latter Agency's staff are to be transferred to the EEAA with their grades and seniority and are to be assigned to the administrative sectors of the EEAA by a decree issued by the Agency's Executive Head.

Article 3 The Environmental Affairs Agency's Board of Directors is established by Prime Ministerial Decree; its Chairman is the competent Minister for Environmental Affairs and its members are:

- * The Executive Head of the EEAA, who shall be Vice Chairman of the Board of Directors ex-officio
- * One representative at least from each of the following six Ministries to be selected by the concerned Ministers: Agriculture, Animal and Fisheries Resources and Agrarian Reform, Public Works and Water Resources, Transportation and Communications, Industry, Interior, and Health
- * Two experts in the field of the Environment selected by the competent Minister for Environmental Affairs upon a proposal by the EEAA Executive Head
- * Three representatives from non-governmental organizations**** concerned with the environment to be selected from among candidates of these organizations in agreement with the competent Minister for Environmental Affairs
- * One of the senior employees of EEAA selected by the competent Minister for Environmental Affairs upon a proposal by EEAA's Executive Head
- * The Head of the concerned Legal Counsel Department from the State Council
- * Three representatives from the Public Business Sector selected by the competent Minister for Environmental Affairs from among the nominees of the Executive head of the EEAA

**** NGO's

- * Two representatives from universities and scientific research centres, selected by the competent Minister for Environmental Affairs from among the nominees of these bodies

Representatives of concerned ministries shall be invited to attend when the Board of Directors is discussing subjects related to their sectors and under their supervision. The Board of Directors may also resort to experts when considering specific matters. None of these experts shall have a vote during deliberations. The Board of Directors may form advisory committees from among specialized experts to study certain subjects. The Board of Directors may also entrust a specific assignment to one or more of its members.

The Board of Directors' secretariat shall be held by the EEAA General Secretary, who will have no vote in the deliberations unless he has been selected as a Board of Directors' members. The Board of Directors shall be nominated every three years.

Article 4

The EEAA's Board of Directors is the supreme authority in charge of the EEAA and sets its general policy. It shall have the authority to take any decisions that it deems necessary for the fulfillment of the aims for which the EEAA has been established and within the framework of the National Plan. It shall, particularly, have authority for the following:

- * Approval of National Plans for Environmental Protection

- * Approval of the Emergency Environmental Plan for disasters
- * Preparation of draft laws concerning the Environment
- * Approval of experimental projects undertaken by the EEAA
- * Approval of the Environmental Training and Planning Policy
- * Approval of necessary norms and standards to ensure that the environment is not polluted
- * Approval of bases and procedures for the assessment of environmental impacts of projects
- * Supervision of the Environmental Protection and Development Fund
- * Approval of the organizational structure of the EEAA and its branches in the governorates
- * Approval of the EEAA's By-Laws and its staff regulations
- * Approval of the EEAA's Draft Annual Budget
- * Study of all subjects that the Chairman of the Board of Directors deems worthy to be presented to it and which are within the EEAA's competence
- * Determination of which of the Board of Directors' resolutions should be referred to Cabinet for a decision. In all circumstances, the Board of Directors should include with its resolutions, and particularly for those which it deems should be referred to Cabinet, a study on the execution costs and the expected results.

Article 5

The EEAA's Executive Head is responsible for the implementation of the general policy set for the achievement of the EEAA's objectives and for the implementation of the Board of Directors' Resolutions. His competence is to:

- Assume the Minister's authority with respect to the staff of the EEAA as prescribed in the laws and regulations
- Assume the Minister's authority prescribed by various laws and regulations related to the affairs of the EEAA and to the management of its technical, financial and administrative matters and the achievement of its objectives
- Assume the Minister's authority in the scope of applying the provisions of Law No. 9 for the 1983, promulgating the Law of Bids and Auctions and its Executive Regulations
- Develop the working systems of the EEAA to strengthen its departments and to issue the necessary decisions for accomplishing these objectives

- Obtain data and information connected with the objectives of the EEAA from various concerned governmental and non-governmental establishments existing both inside or outside the country
- Ensure the application of the provisions of the aforementioned Law for the Environment and these Executive Regulations with the agreement, coordination and cooperation of other concerned establishment according to the Law

Article 6 The EEAA will have an organizational structure issued by a decision from the EEAA's Executive Head after the approval of the Board of Directors and with the agreement of the Central Authority for Organization and Administration and the Ministry of Finance.

CHAPTER THREE

THE ENVIRONMENTAL PROTECTION FUND

Article 7 A special fund shall be established in the EEAA under the name of "The Environmental Protection Fund". It shall be endowed with:

- A- State budget allocations to consolidate the fund
- B- Contributions and donations presented by national and foreign bodies for purposes of environmental protection and development and which are accepted by the EEAA's Board of Directors
- C- Fines and compensations by court rulings or which are agreed upon for damages affecting the environment
- D- Resources from the Natural Reserve Fund as prescribed in Law No. 102 of the year 1983
- E- The EEAA's share of the 25% dues imposed on travel tickets issued in Egypt in Egyptian currency, according to Article 1 of Law No. 5 of the year 1986 and to the Prime Minister's Decree No. 697 of the year 1986, with a minimum of 12.5% of the total proceeds of the above mentioned dues
- F- The return from experimental projects undertaken by the EEAA
- G- Remuneration for services rendered by the EEAA to third parties
- H- Duties on permits issued by the EEAA. The amounts which are collected on a temporary basis as fines and compensation for damages affecting the environment shall be deposited in trust in the Fund.

The Fund shall have a special budget. The Fund's fiscal year shall start and end simultaneously with the State's fiscal year. The surplus of the Fund shall be carried over from one year to another. The Fund's moneys are considered public moneys.

Article 8 The Fund's resources shall be allocated for expenditures therefrom in order to achieve its

objectives, and particularly, the following:

- * Confronting environmental disasters
- * Experimental and pilot projects in the field of natural wealth and environmental pollution protection
- * Transfer of low cost techniques that have been proved to have been successfully applied
- * Financing the manufacture of types of equipment, devices and stations treating environmental pollutants
- * Establishing and operating Environmental Monitoring Networks
- * Establishing and administering Natural Reserves with the aim of preserving natural wealth and resources
- * Confronting pollution from unknown sources
- * Financing the necessary studies for the preparation of environmental programs and assessing the required norms and criteria that are required for preserving the environment
- * Participating in financing environmental protection projects undertaken by local administrative agencies and non-governmental organizations, to which a portion of financing is provided throughout the public's participation
- * Projects for combating pollution
- * Issuing bonuses for outstanding accomplishments for efforts exerted in the field of environmental protection
- * Consolidating the EEAA's basic structure and developing its activities
- * Other purposes aimed towards protecting and developing the environment and that are approved by the EEAA's Board of Directors

CHAPTER FOUR

INCENTIVES

Article 9 The EEAA shall, jointly with the Minister of Finance, set up within six months from the enforcement of these Executive Regulations an incentives System that the EEAA and competent administrative bodies may offer to the authorities, establishments, individuals, and others who undertake works or projects that protect the environment. This shall be done with the provision that due consideration is given when setting up this system to the privileges and conditions prescribed by the laws and decrees that are in force and, particularly, to those regarding investments, customs, industry, cooperatives and others.

SECTION I

PROTECTION OF THE LAND ENVIRONMENT FROM POLLUTION

CHAPTER ONE

DEVELOPMENT AND ENVIRONMENT

Article 10 The competent administrative body or the body that grants permits shall assess the

environmental impact of establishments that are requesting permits, according to the elements, designs, specifications and bases which are issued by the EEAA in agreement with the competent administrative body and which shall be reviewed by the EEAA, whenever necessary.

Article 11 The provisions of Article 10 of these Executive Regulations shall apply to the establishments given in Annex 2 of these Executive Regulations.

Article 12 It shall be mandatory for permit applicants to attach to their applications a statement, duly filled out, containing the data included in the form prepared by the EEAA in agreement with the competent administrative authority. The EEAA shall prepare a register including copies of this form and the assessment results as well as the EEAA requirements from establishment owners.

Article 13 The EEAA may resort to any experts whose names are included in a list to be issued by the EEAA according to the criteria set by the EEAA's Board of Directors, so that such experts may give their opinions on the assessment of the environmental impact of an establishment intended to be constructed and for which a permit is being requested.

Article 14 The competent administrative body shall notify owners of establishments of the assessment results by registered letter with return receipt requested. The owner is entitled to object in writing to this result before the Permanent Review Committee within a period of thirty days from the date of his notification. This Committee shall be formed by decree by the competent Minister for the Environment. It shall be chaired by a Counsellor from the State Council and the membership is as follows:

- A Representative from EEAA nominated by its Executive Head
- The establishment's owner or his representative with an official power of attorney
- A representative from the concerned body or the body granting permits unless it is the competent body
- Three experts to be selected as members of the Committee for three years upon their nomination by the EEAA's Executive Head

The Committee may form, from among its members and others, sub-committees to study the objections referred to them and to present reports thereof to the Committee. The said Committee may also, when carrying out its duties, resort to whomever they consider advisable for that purpose. It shall issue its decision within sixty days from the date of receipt of the completed objection documents.

Article 15 The Permanent Review Committee, described above in Article 14 of these Executive Regulations, shall be concerned with hearing the objections to assessment results that are submitted or referred to it or with the proposals that require execution as deemed necessary by the EEAA. It shall issue its opinion regarding these objections with respect 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.

He shall also attach thereto the documents that he deems support the reasons for his objection.

Article 16 The Committee shall convene upon an invitation from the EEAA's Executive Head within 15 days from the date of the EEAA's receipt of the written objection. An EEAA representative nominated by the Executive Head shall draw up the meeting's minutes. He shall not have a vote in the discussions taking place. The Committee's decision shall be issued by a simple majority of votes. The meeting's minutes shall be signed by all attending members.

Article 17 Establishment owners shall, according, to the provisions of these Regulations, maintain a register to record the extent of their establishment's impact on the environment as follows:

- Emissions therefrom or discharges
- Specifications of discharges after the treatment process, and the efficiency of utilized treatment units
- Procedures of follow-up and environmental safety applied at the establishment
- Periodical tests and measurements and their results
- The name of the person in charge of follow-up

The Register shall be prepared according to the form described in Annex 3 of these Executive Regulations.

Establishment owners or their representatives are obliged to notify the EEAA immediately, by 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 them.

Article 18 The EEAA shall be competent for the follow-up of the registered data to ascertain its conformity with actual fact. It shall also take the necessary samples and conduct the appropriate tests that show the impact of establishment activities on the environment and establishment compliance with the criteria set for protecting the environment.

Such follow-up shall be undertaken every year. A report on each follow-up shall be filed with the competent sector within the EEAA, shall be signed by the officer in charge of follow-up tests, and shall include dates. If any violations are discovered, the EEAA will notify the competent administrative authority which shall demand from the establishment's owner, by registered letter with return receipt requested, expeditious rectification of such violations according to industry norms. If he fails to accomplish this within 60 days, the Executive Head is entitled, in coordination with the competent administrative authority, to take the following measures:

- 1- To close down the establishment
- 2- To suspend the damaging activity

- 3- To file a lawsuit demanding suitable compensation to remedy the damages resulting from the violation

Establishments shall maintain the registers, duly completed, on a permanent basis according to the form prescribed in Article 17 of these Executive Regulations. Whenever new data is registered, establishments shall maintain it for a period of ten years effective from the date of the signature of the EEAA representative in the register confirming its review.

Article 19 Expansions or renewals of existing establishments are subject to the same provisions as prescribed in Articles 19, 20, 21, and 22 of the aforementioned Law for the Environment.

Changes in production patterns of the operating machines or an increase in the number of staff in a way that exceeds the capacity of the working place or any essential modifications to an establishment's buildings are considered to be expansions and renewals. Particularly, essential modifications concerning the ventilation system or the change of work location or other similar modifications that may result in harmful effects on the environment or on the establishment's staff, are considered to be expansions and renewals.

Article 20 The existing Environmental Monitoring Networks, including the stations, shall be considered as work units administratively subordinate to their competent bodies. They shall, within the scope of their competence, periodically monitor environmental components and pollutants and ensure the availability of the relevant data to the concerned bodies. They may, in the performance of their duties, resort to the help of research centres and competent bodies and agencies that shall provide the Networks with the requested data and studies. The EEAA shall supervise the establishment and operation of the environmental monitoring networks as a preliminary step in setting up of a national program for environmental monitoring.

Article 21 The EEAA, in cooperation with the ministries, governorates, public bodies and other concerned bodies, shall set up an Emergency Plan to confront environmental disasters. The plan shall be sanctioned by the Cabinet. The Emergency Plan shall be based mainly on the factors shown in the following phases:

A. Phase prior to the occurrence of disasters

- To determine the types of environmental disasters possible and the areas that would be most affected by them and to identify the expected impact of each type
- To collect locally and internationally available information on how to confront environmental disasters and the means of alleviating the damages resulting therefrom
- To survey available potentials for confronting disasters at local, national and international levels and to determine the methods of resorting to them in a way that ensures prompt confrontation with disasters

- To determine the bodies responsible for reporting disasters or the forecasting of their occurrences
- To set appropriate procedures for handling each type of disaster
- To establish a Central Operations Room for receipt of reports on environmental disasters and to follow-up the receipt and dispatching of relevant and accurate information with the aim of mobilizing the necessary potentials for confronting such disasters.
- To supervise, train and follow up, on all levels, the confrontation of disasters
- To facilitate the system and means of exchanging information among the various bodies as to matters relating to disasters, along with ensuring the system's efficiency
- To determine the means of exchanging and requesting assistance among the various bodies when managing a crisis together with establishing an appropriate data base.

B. Phase after the immediate occurrence of disasters

- To form a task force team to follow up the confrontation of an environmental disaster upon its occurrence
- To execute the plans set up for coordinating and cooperating on local, regional and central levels to ensure the continuation of flow of equipment and supplies to help in disaster locations
- To achieve optimum utilization of available potentials within the various bodies for dealing with disasters
- To coordinate requests from among the other bodies during the progression of disaster confrontation
- To determine the best means for informing citizens of a disaster, its progress and the means of dealing with its effects

C. Phase of clean-up of effects from disasters

- To determine the roles to be played by the various participating bodies in removing the effects of a disaster
- To develop plans aimed at improving the performance of disaster confrontation
- To raise the level of public awareness for dealing with disasters

D. Phase of Assessing Disasters

- To record the economic and social effects resulting from the occurrence of disasters
- To record the lessons learnt from dealing with individual disasters
- To formulate suggestions for avoiding shortages and deficiencies discovered during confrontation

Article 22 The Operations Room mentioned in Article 21 of these Executive Regulations shall form a task force team to confront environmental disasters upon their occurrence or at the time they are expected to occur. This team shall include representatives from various concerned bodies. The head of the task force team shall have all necessary authority to confront an environmental disaster, in cooperation with competent bodies.

Article 23 All methods of hunting, killing or catching of birds and wild animals, as prescribed in Annex 4 of these Executive Regulations, are prohibited. Possession of these birds and animals, their transport, walking about with them, selling them or offering them for sale, whether dead or alive, shall be prohibited. It is also prohibited to destroy the nests or the eggs of these birds. The provisions of this Article shall apply in all natural reserve areas and also in areas where animals and birds are threatened with extinction, and for which a decree by the Minister of Agriculture or by Governors has been issued in coordination with the EEAA.

Article 24 It is forbidden to issue permits for the hunting of wild birds and animals prescribed in Annex 4 of these Executive Regulations except for scientific research purposes or for overcoming the spread of an epidemic or for other purposes of which the EEAA approves. Applications for permits shall be submitted in writing to the Ministry of the Interior, indicating the kind of wild bird or animal the hunting permit is requested for, their required numbers, the purpose thereof, the hunting period, the individual or individuals for which the permit is required and the method and equipment to be used in hunting. The said Ministry shall refer this request to the EEAA in order to ascertain the seriousness and importance of the application.

CHAPTER TWO

HAZARDOUS SUBSTANCES AND WASTES

Article 25 Handling of hazardous substances and waste shall be prohibited unless a permit has been issued by the competent body according to the type and use of hazardous substance and waste as follows:

1. Hazardous agricultural substances and waste, among which are pesticides and fertilizers - Ministry of Agriculture
2. Hazardous industrial substances and waste - Ministry of Industry
3. Hazardous pharmaceutical 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 ionized radiation is emitted - Ministry of Electricity; Authority for Nuclear Energy
6. Hazardous, inflammable and explosive substances - Ministry of the Interior
7. Other hazardous substances and waste - the competent Minister for Environmental Affairs shall issue a decree determining the competent body for issuing such a permit upon the proposal of the EEAA Executive Head.

Each of the ministers of the aforementioned ministries in this article shall, within the scope of his competence and in coordination with the Minister of Health and the EEAA, issue a table of hazardous substances and waste defining:

- A- The types of hazardous substances and waste that are within the scope of his ministry's competence and the degree of danger of each
- B- The mandatory control standards that must be considered when handling any of them
- C- Means of disposal of empty packages from such substances after handling them
- D- Any other control standards or conditions that the ministry may deem important to add

Article 26 The permit applicant shall submit his request in writing to the competent body as stipulated in Article 25 of these Executive Regulations according to the following procedures and conditions:

Procedures for Granting a Permit:

A permit for handling hazardous substances and waste shall have a maximum validity of five years unless some events necessitate its review. The competent administrative body may, as prescribed in Article 40 of these Executive Regulations, grant temporary permits for shorter periods according to needs that may arise.

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

1. Name of the person who will handle the hazardous substances and waste -
Establishment's name
Address and telephone no.
Establishment's location and areas
Contour maps of the establishment location
Subterranean water levels
Establishment's safety equipment
Information concerning insurance

Program for monitoring the environment in the surrounding areas of the establishment

2. The producer of hazardous substances and waste (full name, address, telephone and fax numbers)
3. A complete description of the hazardous substances and waste to be handled and the nature and concentration of the dangerous elements contained therein
4. Determination of the annual amount of hazardous substances and waste to be handled and a description of the method of their packing (barrels - tanks - in bulk)
5. Description of means intended to be utilized for storing hazardous waste and substances, storing period for each, together with a written commitment to inscribe a clear statement on the package stating its contents, the extent of danger thereof and how to act in an emergency
6. A clear indication of the available means of transportation (by land - railway - sea - air - internal waterways) and clarification of routings and itineraries
7. A complete statement of the method intended to be used for the treatment and disposal of the hazardous waste and substances for which the permit is being applied for
8. A commitment not to mix hazardous substances and waste with other types of waste that may result from social and productive activities
9. A commitment to maintain registers, including comprehensive statements of hazardous substances and waste, quantities, types, sources, frequencies and periods of their collection and storage, means of their transportation and treatment, together with providing this data upon request, and the non destruction of the registers for a period of five years from the date of starting them
10. A commitment to undertake all procedures that ensure the proper packaging of hazardous waste and substances during the collection, transportation and storage phases
11. A detailed description of an Emergency Plan for confronting all unforeseen circumstances that 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 correctness of the data stated in this document

Conditions for Granting a Permit

1. The filling in of all required data
2. Availability of personnel trained in the handling of hazardous substances and waste
3. Availability of necessary means, potentials and systems for safe handling of such substances
4. Availability of requisites for confronting hazards that may result from accidents occurring during the handling of these substances
5. Assurance that no harmful effects shall result to the environment and public health from the activity for which a permit is being applied for

Article 17 Permits for handling hazardous substances and waste shall be issued against a cash payment to be determined by decree by the competent minister. Permits are valid for a maximum period of five renewable years.

The body that grants permits may cancel a permit or suspend an activity by justified decision in the following cases:

1. If a permit has been issued upon the submission of incorrect data
2. If the party who has been granted the permit has violated its conditions
3. If dangerous environmental effects result from an activity and they were unforeseen at the time of the permit's issue
4. If sophisticated technology becomes known that may, with minor modifications, be applied, and the use of which would lead to a greater protection of the environment and the staff's health
5. If the EEAA concludes that it is unsafe to handle such substances and waste

The body that grants permits may request applicants to fulfill other such conditions as it deems necessary to ensure the safe handling of these substances, in coordination with the EEAA and the Ministry of Health. In all cases, applicants for permits may not handle hazardous substances and waste before obtaining their permits, written on the relevant form which must be kept with the person in charge of the handling, to be presented upon request.

Article 28 The management of hazardous waste shall be subject to the following general rules and procedures:

1. Generation of hazardous waste:

Establishments where hazardous waste is generated shall be subject to the following:

- A- To strive to reduce the rate of generation of these wastes, quantitatively

and qualitatively, by developing the utilized technology, adopting clean technology, and selecting substitutes for the product or for raw substances that are less harmful to the environment and public health

- B- To describe, quantitatively and qualitatively, the generated waste and to register the same
- C- To establish and operate units for waste treatment at source, provided the EEAA approves the treatment system and the technical specifications of these units and their operational programs. In case of difficulty of treatment or disposal of hazardous waste at its generation source, the establishment wherein it is generated shall be committed to collect and transport it to a location prepared for its disposal to be determined by the relevant local authorities and the competent administrative and environmental bodies. The handling of this waste shall be subject to all the conditions and provisions concerning it and prescribed by these Executive Regulations.

2. Phase of Collecting and Storing Hazardous Waste:

Establishments where hazardous waste is generated shall be subject to the following:

- A- To determine specified locations for storing hazardous waste where safety conditions are set up to prevent the occurrence of any harm to the public or to those persons exposed to the same.
- B- To store hazardous waste in special containers made of strong materials without holes through which liquids can leak. These containers are to be provided with hermetic covers and be of adequate capacities to accommodate the quantity of hazardous waste generated or conform to the appropriate criteria for storing this waste according to type.
- C- A plainly visible sign is to be inscribed on the containers of hazardous waste that indicates their contents and warnings of the dangers that may result from dealing with them in an inappropriate manner.
- D- A time schedule shall be set up for the collection of hazardous waste so that it is not left for long periods in storage containers.
- E- The generator of hazardous waste shall be obliged to provide the above-mentioned containers and shall take special care in washing them after use and shall not place them in public areas.

3. Phase of Transporting Hazardous Waste:

Establishments transporting hazardous waste shall be subject to the following:

- A- It shall be prohibited to transport hazardous waste in a way other than by the means of transportation that a licensed establishment is permitted

to use to manage hazardous waste and it is mandatory that these means of transportation should comply with the following conditions:

- 1- Transport trucks shall be fitted with all necessary safety equipment and shall be in good working condition.
 - 2- The capacity of transport trucks and their rotation schedule shall be adequate for the volume of hazardous waste.
 - 3- Trucks shall be driven by specially trained drivers, able to take independent action, particularly in emergencies.
 4. Clearly evident signs shall be placed on these trucks, indicating the extent of danger of their cargo and the best action to take in 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 quickly and appropriately in emergencies.
- C- Trucks transporting hazardous waste shall be prohibited from passing through residential and other populated areas and through city centers during daytime.
- D- The official competent body shall be notified of the address of the garage where these trucks are parked and of the numbers and dates of their permits
- E- Trucks transporting hazardous waste shall be constantly washed and cleaned after each use according to the instructions set down by the Ministry of Health in coordination with the competent administrative body as prescribed in Article 40 of these Executive Regulations.
- 4. The following measures shall be taken into consideration when authorizing the transit of ships transporting hazardous waste:**
- A- Prior notification is a requisite. The competent administrative body is entitled to refuse this authorization in case of the possibility of the occurrence of environmental pollution.
 - B- In case of granting the transit authorization, all necessary and stipulated precautions stated in international conventions shall be taken, with the provision that the ship has a Guarantee Certificate as prescribed by law No. 4 of 1994

5. Phase of Treatment and Disposal of Hazardous Waste:

Sites where hazardous waste is treated and disposed shall be subject to the following:

- A- Utility sites for the treatment and disposal of hazardous waste shall be selected in areas far from populated and residential areas at a minimum distance of three kilometers from them. The following requirements, equipment and installations shall be provided at these sites:
- 1- The site area must be proportional in size to the quantity of hazardous waste so as to prevent its storage for extended periods.
 - 2- Sites shall be encircled with brick walls having a minimum height of 2.5 meters.
 - 3- Sites shall be provided with more than one gate of suitable width to allow the easy entry of trucks transporting hazardous waste to the site.
 - 4- Sites shall be provided with appropriate water sources and with W.C. facilities.
 - 5- Sites shall be provided with all the protective and safety requirements prescribed in the Labour and Vocational Health Laws as well as with telephone lines.
 - 6- Sites shall be provided with all mechanical equipment that facilitates the work process.
 - 7- Sites shall be provided with warehouses especially equipped for storing hazardous waste until treatment and disposal thereof. This equipment shall differ according to the type of hazardous waste received by each utility.
 - 8- Utilities shall be provided with incinerators for burning certain types of hazardous waste.
 - 9- Utilities 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- Sites shall have ditches for sanitary dumping of adequate capacity for burying incineration remains.
- B- Treatment processes for hazardous waste that is reusable and recyclable shall be carried out within the following framework:
- 1- Reutilizing some hazardous waste as fuel for energy generation
 - 2- Recovering organic solvents and reutilizing them in extraction processes

- 3- Recycling and reutilizing some organic substances from hazardous waste
 - 4- Reutilizing ferrous and non-ferrous metals and their compounds
 - 5- Recycling and reutilizing certain non-organic substances from hazardous waste
 - 6- Recovering and recycling of acids or alkalines
 - 7- Recovering substances used for pollution reduction
 - 8- Recovering certain substances used for ancillary elements
 - 9- Recovering used oil and reutilizing it after its refinement. Consideration should be given to the interrelation of environmental and economic returns.
- C- Processes for treatment of hazardous waste that cannot be reutilized or recycled shall be carried out within the following framework:
- 1- Sedimentation of hazardous waste injected into wells, saline vaulted tunnels, and natural reservoirs in areas remote from urban and residential areas
 - 2- Burial of hazardous wastes in specially prepared pits, isolated from the other components of the environment
 - 3- Biological treatment of hazardous waste by using certain live micro-organisms for decomposition
 - 4- Chemical or physical treatment of hazardous waste by evaporation, dilution, calcination, equalization, sedimentation, etc.
 - 5- Burning in specially equipped incinerators that do not allow the escape of gases and fumes into the surrounding environment
 - 6- Permanent storage (such as placing hazardous waste containers inside mines)
- D- Taking all procedures to guarantee restriction and reduction of hazardous waste generated by the following measures:
- 1- Developing clean technology and generalizing its use
 - 2- Developing suitable systems for the management of hazardous waste

3- Increasing the proportion of reutilization and recycling of hazardous waste after treatment whenever possible

E- Setting up a periodic program for surveying different elements in the environmental system (organic and non-organic) at utility sites for treatment and disposal of hazardous waste and in their surroundings. Permits shall be withdrawn and work at utilities suspended upon the appearance of any indications of damage to a utility's surrounding environment.

F- Establishments that have been granted a permit to handle and manage hazardous substances and waste shall be responsible for any damages to third parties resulting from their non-observation of the provisions of these Executive Regulations.

The EEAA shall be competent to review the hazardous waste directories subject to the provisions of the law with the cooperation of the concerned ministries regarding the relevant directories issued by those ministries.

Article 29 It is prohibited to construct any installations with the purpose of treating hazardous waste except after a permit is issued by the competent governorate, after consulting the EEAA, the Ministry of Health, the Ministry of Labour and Manpower, and the competent Ministry for the type of waste according to the provisions of Article 25 of these Executive Regulations and in such a way as to guarantee that all conditions ensuring the environment's safety and the staff's safety have been fulfilled by establishments.

Disposal of hazardous waste shall be executed in conformity 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 strictly prohibited to import hazardous waste or to allow its transit through the territory of the Arab Republic of Egypt. [*Something missing here] administrative department, in the Ministry of Maritime Transportation, or in the Suez Canal Authority, each within the limits of its competence, to allow the passage or transit of ships carrying hazardous wastes, in the regional waters or in the exclusive economic zone of the Arab Republic of Egypt, provided that the EEAA is notified accordingly.

Article 31 Officers in charge of the production or handling of hazardous waste, whether in gaseous, liquid, or solid state, shall take all due precautions so as to guarantee the non-occurrence of any environmental damages. They shall particularly observe the following:

A- Selection of sites for the production or storage of these substances shall be undertaken according to the necessary conditions and according to the type and quantity of those substances.

B- Buildings where these substances will be produced or stored in shall be

designed according to engineering norms that shall be complied with for each type of substance, as shall be determined by decree from the Minister of Housing after consulting the EEAA. These buildings shall be subject to periodical inspections by the administrative body granting the permit.

- C- Availability of necessary conditions for the transport means or the place for storing these substances so as to guarantee non-damage to the environmental staff health or citizen health.
- D- The technology and equipment used for the production of these substances shall not result in damages to establishments, the environmental or the staff.
- E- Buildings shall have appropriate numbers and quantities of safety systems and alarms, protection, emergency combating, and first aid equipment as determined by the Minister of Labor and Manpower after consulting the EEAA, the Ministry of Health and the Civil Defense administrative body.
- F- An emergency plan for confronting any likely accidents that may occur during the production, storage, transport, or handling of these substances shall be made available. This plan shall be reviewed and sanctioned by the body granting permits after consulting the EEAA and the Civil Defense Body.
- G- The staff of these establishments shall be subject to periodic medical checkups and shall be treated for occupational diseases at the expense of their employers.
- H- Establishments producing these dangerous substances shall insure their workers for amounts to be determined by 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. Due considerations shall be given to determining the insurance amounts for the degree and extent of danger to which each category of worker is exposed to in each productive unit.
- I- Informing the workers who handle these substances of their dangers and the necessary precautions to be taken when handling them. To ensure their full awareness of all this information and that they have received adequate training about this.
- J- Informing residents of regions surrounding production sites production sites where dangerous wastes are handled of likely and possible dangers and hazards from these substances and the method for facing them, along with ensuring that they have become aware of the warning and alarm systems whenever an accident occurs, and how to act in case of the occurrence of accidents.
- K- Establishments producing and handling these hazardous substances shall compensate injured citizens in the areas surrounding production or storage sites for the injuries resulting from accidents of these activities, or from the dangerous emissions or leakage from them. Those assigned to the production and handling of hazardous substances shall submit an annual report on the extent of their commitment towards implementing the necessary precautions.

Article 32 Establishments producing or importing hazardous substances shall, in their production or import of these substances, observe the following conditions:

First: Packaging Specifications

- A- The type of packaging into which these substances are to be placed shall be appropriate to the type of substance contained therein. Packages shall be tightly closed and difficult to damage.
- B- The capacities of packages shall be so that they may be easily carried or transported without exposure to damage or harm.
- C- The insides of packages shall be made of types of material that are not affected by storage for the entire period of effectiveness of the substances contained therein.

Second: Packaging Data

Packing slips shall state the following:

- A- Package contents, the effective substance, and the degree of its concentration
- B- Total and net weights
- C- Name of producer, production date and production number
- D- The kinds of dangers and poisoning symptoms
- E- First aid to be applied in case of harm occurring
- F- Proper method for opening up, unpacking, and using
- G- Proper method of storage
- H- Method of disposal of empty packages

All these data shall be written in Arabic, using simple language that is easy for average individuals to read and understand. Packages shall be legibly marked in a visible place on the outside of the package. The text shall be difficult to remove, blotch, or change. These data shall be explained by illustrations indicating the method of opening, unpacking, storing, and disposing and the international symbols for danger and toxicity.

Article 33 The owner of an establishment whose activity results in dangerous waste shall, according to the provisions of these Executive Regulations, keep a register for this waste and the method of disposal thereof, and of the names of the contractual parties who will receive this waste, including the following data:

1. Establishment name and address
2. Name of the person responsible for recording the data in the register, and his job

title

3. The period of time covered by the current data
4. Special conditions issued by the EEAA for the establishment
5. A statement indicating the types and quantities of hazardous waste resulting from establishment activities
6. Method of disposal thereof
7. The parties with whom a contract is signed to receive this hazardous waste
8. Date on which this form was filled out
9. Signature of the officer in charge

The EEAA is competent for following up the register's data to ensure that it is correct.

SECTION II

PROTECTION OF THE AIR ENVIRONMENT FROM POLLUTION

Article 34 Subject to the provisions of Articles 10 and 11 of these Executive Regulations, it is mandatory that sites where projects are to be set up shall be suitable for establishment activities so as to fit in with the nature of the area, and with the plan set up for using the land, as determined by the Ministry of New Urban Communities. The overall pollution resulting from the total installations in a given area shall be within permissible limits as indicated in Annex 5 of these Executive Regulations.

In all cases, due consideration shall be given to determining the suitability of the site, to its distance from urban residential areas, whether in the project's area or the surrounding areas, and the prevalent wind direction.

Article 35 All establishments indicated in Annex 2 of these Executive Regulations for which an environmental impact assessment is required prior to issuing permits to exercise their activities, shall be subject to the provision of the foregoing Article. Permits confirming the suitability of sites shall be issued by the body competent for assessing environmental impact from activities, after referring to the EEAA on this regard.

Article 36 Establishments that are subject to the provisions of this law in exercising their activities shall be committed towards avoiding emissions or leakage of air pollutants at or above the maximum limits allowed by current laws and decrees, and not exceeding the limits determined in Annex 6 of these Executive Regulations. Nor shall they cause any changes in the composition and characteristics of natural air to such a degree that results in danger to human health and to the environment.

Article 37 No machines, engines, or vehicles that produce exhaust waste with pollutants exceeding the following maximum limits shall be used:

First: Vehicles currently in service

Carbon 70% in volume at a speed of 600-900 rotations/minute

Monoxide:

Unburned

Hydrocarbons: 1000 parts per million, at a speed of 600-900 rotations/minute

Smoke: 65% degree of darkness or the equivalent in other units, at minimum acceleration

Second: New vehicles to be licensed as of 1995:

Carbon

Monoxide: 4.5% in volume, at a speed of 600-900 rotations/minute

Unburned

Hydrocarbons: 900 parts per million, at a speed of 600-900 rotations/minute

Smoke: 50% degree of darkness, or the equivalent in other units, at maximum acceleration

This article shall apply in the Governorates to be determined by Decree by the Minister of Interior, provided that the decree shall comprise a period not exceeding one year for starting the implementation of this article, so as to enable owners of these machines, engines, and vehicles to adjust their situations according to 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 in this article three years after the publication data of these Executive Regulations.

Article 38

Dumping, treating, or burning of garbage and solid waste shall be strictly prohibited - with the exception of infectious waste generated by medical care in hospitals and health centers - except in places specially designated for this purpose. These places shall be far from residential, industrial, and agricultural areas and waterways, in accordance with the specifications, norms, and at the minimum allowable distances from these areas, as follows:

1. Burning of waste shall be strictly prohibited in residential or industrial areas, with the exception of infectious waste as referred to in clause 1 of this Article. Burning of waste shall take place in special incinerators having the following specifications:
 - A- They shall be located opposite to the direction of wind prevailing in residential communities.
 - B- They shall be at least 1500 meters from the nearest residential area.
 - C- The capacity of the incinerator or incinerators shall be sufficient to burn

the garbage transported thereto within 24 hours.

D- Incinerator sites shall be in places with adequate space for receiving the amounts of garbage expected from the nature of activities and the number of inhabitants in urban areas.

2. In case of extreme necessity and within a transitional period not exceeding 3 years from the date of publication of these Executive Regulations, garbage shall be permitted to be burned uncovered, under the following conditions:

A- The prior issuance of a permit from the EEAA and the Civil Defense Body. Burning shall be under the supervision of both the local and Civil Defense bodies.

B- The location for burning of garbage shall be at a minimum distance of 1.5 kilometers from residences and industrial areas and communities, and shall be located opposite to the prevailing wind direction from residential and industrial areas.

C- Local bodies shall prepare a location to receive garbage after carrying out an integrated study on the topography and nature of the area, and the quantity of waste requiring disposal there per 24 hours, provided that such places shall:

- Be at a contour level lower than the surrounding area
- Be adequate for storing the garbage to be transported there and for carrying out other operations normally carried out at sites such as sorting and any other related operations
- Have a water source available for emergency cases and other necessary uses
- Have the necessary equipment for storing, overturning and disposing ashes by burying them so they shall not be dispersed into the air, or leak into subterranean water

3. Infectious waste from medical centers, hospitals and health centers shall be burned on-site in incinerators specially designed for this purpose and capable of handling the generated quantities without depositing or storing them near the incinerator. If necessary, and with the approval of local competent authorities as well as the EEAA, the waste of these units may be transported to the nearest hospital that is provided with an incinerator or incinerators, provided they can absorb the waste to be transported there. This waste shall be transported in sealed containers that prevent the dispersal of their contents into the air, provided that these containers shall be burned together with their contents of waste.

4. In all cases, incinerators shall be technically adequate to prevent ashes or their emissions from dispersing except within the permissible limits

as prescribed in Annex 6 of these Executive Regulations.

5. Local bodies, in agreement with the EEAA, shall allocate places where solid garbage shall be dumped, treated, or burned according to the provisions of this Article.

Article 39 Collectors of garbage and solid waste shall maintain their garbage bins and vehicles clean at all times and this shall be one of the conditions set to ensure the safety and efficiency of garbage transport vehicles.

Garbage collecting bins shall be covered tightly so that no offensive odors shall be emitted from them, and to avoid them from becoming a source for attracting and growing flies and other similar insects, or a focus for attracting stray animals. Their garbage contents shall also be collected and transported at suitable intervals according to the conditions of each area. It is mandatory that the quantity of garbage shall not exceed the capacity of any of these bins at any time. The competent department for local matters shall control the implementation of the provisions of this Article.

Article 40 Spraying or using pesticides or any other chemical compounds for purposes of agriculture, public health or others shall be prohibited except after complying with the conditions, norms and guarantees set by the Ministry of Agriculture, the Ministry of Health, and the EEAA, as follows:

- A- It is mandatory to notify health units as well as veterinary units of the types of sprays and antidotes before pesticide spraying.
- B- Necessary first aid supplies shall be provided.
- C- Protective clothing and materials shall be provided for laborers carrying out the spraying.
- D- Citizens shall be warned about being in sprayed areas.
- E- Spraying shall be carried out by laborers trained for this type of work.
- F- Special consideration shall be given to refrain from spraying by air planes except in cases of extreme necessity as estimated by the Minister of Agriculture. In such a case, the areas that require spraying shall be indicated and determined on maps, and shall be highlighted with a special color along with marking the principal flying obstacles and the regions where it is prohibited to spray. These areas include the vicinity of residential areas, apiaries, fish farms, and poultry farms, as well as cattle sheds to guarantee that man, animals, plants, water courses, or other components of their environment shall not be exposed, directly or indirectly, currently or in the future, to the harmful effects of these pesticides or chemical compounds.

Article 41 All bodies and individuals, when carrying out exploration, digging construction, or demolition work, or while transporting waste substances or soil shall take necessary

precautions to store or transport this waste in a safe way to prevent it from being dispersed. The authority granting permits for building or demolition shall indicate such requirements on the permit as mentioned in the following:

1. Stacking of waste on site shall be safely carried out so as not to form any impediment to traffic and pedestrian movement. Waste liable to dispersal into the air shall be covered to avoid air pollution.
2. Waste substances and soil resulting from digging, demolishing and construction work shall be transported in special containers or receptacles by using trucks provided and licensed for this purpose, and which fulfill the following conditions:
 - * Trucks shall be fitted with special containers or with tight covers to prevent spreading of dust, soil, and waste substances into the air, or their falling off on the road.
 - * Trucks shall be provided with special loading and unloading equipment.
 - * Trucks shall be in good condition conforming to regulations for safety, efficiency, and lighting and shall be equipped with comprehensive safety systems.
3. Locations assigned to receive this transported waste shall be at a minimum distance of 1.5 kilometers from residential areas, and at a lower contour level. Also, they shall be leveled after complete filling with waste.
4. Local authorities shall determine the locations to which waste shall be transported. It shall not be authorized to transport or dispose of it except in locations specially prepared for such purpose and designated as such by the concerned local authorities.

Article 42

Due consideration shall be given by the competent bodies, according to which activities are involved, to ensure that noxious and harmful smoke, gases, and fumes resulting from their activities shall be within permissible limits for burning any kind of fuel or other substances, whether for industrial purposes or for energy generating or also for installations or any other commercial purposes. Persons in charge of this activity shall take all precautions to minimize the quantity of pollutants resulting from it, according to the following precautions and permissible limits, and chimney specifications when burning any kind of fuel:

Precautions and Permissible limits and Chimney Specifications for Burning any Kind of Fuel:

- A- Necessary precautions for preventing or reducing the quantity of pollutants resulting from fuel burning sources are that a suitable fuel shall be chosen, and that due care shall be given to the sound design of incinerators, the fire house, the funnels and the chimneys. The use of highly efficient control measures shall be observed according to the following criteria:

1. Uncovered burning shall be prohibited whenever the requirements for sound designs are not fulfilled to guarantee full combustion and disposal of wastes through the chimneys according to proper engineering specifications.
2. Burners and fire houses shall be designed in such a way as to ensure the complete mixing of the necessary quantity of air for full burning, in addition to distributing the heat and giving sufficient time for the process along with blending and turning over of the mixture to guarantee its total burning. Thus it is ensured that the emissions from incomplete burning shall be minimized, and the emitted pollutants shall not exceed the permissible maximum limits for emission, according to Annex 6 of these Executive Regulations.
3. The use of coal shall be prohibited in urban regions and near residential areas.
4. Use of Mazut and other heavy oil products, as well as crude oil, shall be prohibited in residential areas.
5. The sulfur percentage of fuel used in urban areas and near residential areas shall not exceed 1.5%.
6. Emissions of gases containing carbon dioxide shall be through chimneys of sufficient height so that these gases may become less condensed before reaching the ground. The use of fuel that contains high amount of sulfur for power generating stations, as well as for industry and in other regions far from inhabited urban areas is permitted provided that suitable atmospheric factors are present and adequate distances are observed to prevent these gases from reaching the residential and agricultural areas and regions, as well as water courses.

B- Chimney Heights:

- 1- The height of chimneys that emit a total of 7000-15000 kg/hour of waste shall be 18-36 meters.
- 2- The height of chimneys that emit a total amount of gaseous waste exceeding 15000 kg/hour shall be at least more than two and a half times the height of surrounding buildings, including the building served by the chimney.
- 3- Due consideration shall be given to the height of chimneys serving public places such as offices, restaurants, hotels and other commercial activities to be at least 3 meters higher than the top of such buildings. The speed of gas emission from the chimney shall also be accelerated.

C- The maximum limits of emission from fuel burning sources are:

POLLUTANT	MAXIMUM PERMISSIBLE
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	LIMIT
SMOKE	1- on Ringlemann Charts *
SUSPENDED ASHES:	
-sources in urban areas or near residential areas	1- on Ringlemann Charts *
-sources far from inhabited urban areas	2- on Ringlemann Charts **
-burning of waste	2- on Ringlemann Charts **
SULFUR DIOXIDE:	
-Existing	4000 mg/m ³
-New	2500 mg/m ³
ALDEHYDES:	
-Burning of waste	20 mg/m ³
CARBON MONOXIDE	
-Existing	4000 mg/m ³
-New	2500 mg/m ³

* 1- on Ringlemann Charts = 250 mg/m³

** 2- on Ringlemann Charts = 500 mg/m³

The competent administrative authority shall adhere to the provisions of this Article.

Article 43 Bodies carrying out research, exploration and drilling work, crude oil extraction and production, as well as refining and processing of crude oil shall comply with the monitoring and procedures derived from international oil industry principles and bases as provided by the competent administrative authority, as well as those indicated in the following:

1. Bodies carrying out research, exploration and drilling work, extraction and production of crude oil for petroleum and petrochemical products, as well as of gas, and processing, refining, storing, and transporting of oil, shall comply with the monitoring, procedures, and precautions necessary for protecting the environment, as derived from international oil industry principles 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 international standard specifications authorized for the methods and means of safe operation in all matters related to refining and storing of petroleum, petrochemicals, and gas, and their transportation as well as disposing of water and other substances

dispensed together with them, to avoid the loss of petroleum or gas. They shall take necessary precautions for protection from fire, for the protection of machines, wells, and residences of workers, oil stores and establishments, and all other methods that the Egyptian General Petroleum Corporation considers necessary, for organizing and guaranteeing the good progress of work, and the preservation of the environment and its neighboring residents. they shall, in particular, comprise the following:

- A- Giving due consideration to the determination of safe distances whether between exploratory or productive wells or the collection and production stations, or any other industrial establishments, workshops, or the main or subsidiary pipelines, houses, religious or social premises or cemeteries.
- B- Ensuring that necessary requirements of space and distances are observed when using explosives near wells, whether in seismic survey operations, or in operations for installing pipelines.
- C- Ensuring the presence of necessary substances, equipment and valves to prevent explosions and oil or gas leakage.
- D- Installing separating equipment and flame 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 oil and gas extracted in tests carried out during drilling operations and the completion of wells, and which are hard to collect, and also any other oil or gas that should be burned either in open pits or by flames. Due care shall be given to select the optimal number and size of burner nozzles, and flames, or in using the sprinkling process, or additional air, or the possibility of using diesel fuel to complete the burning of heavy crude oil.
- F- Installing the necessary chimneys, flames, and vents for production, operation, refining, and storage processes at the power stations belonging to the corporation whether for cold or hot emitted gases.
- G- Making the necessary plans, preparing the machines and equipment, and appointing and training personnel for confronting any fires due to leakage that might occur at well heads or in flow lines, at offshore or industrial establishments, at storage tanks, in warehouses, at workshops, at houses, or at any other similar installations within the limits of the corporation's business.
- H- The following measures shall be complied with in regard to storage tanks:
 - 1- Minimum distances from the edge of main roads, railways, other tanks, buildings, and open spaces that are liable to catch

on-fire shall be observed.

- 2- Tanks shall be tightly closed, and the process of leakage of excess fumes shall comply with international standard specifications.
 - 3- Tanks shall be painted with white or any other light color
 - 4- Each tank shall be surrounded by fences to limit the potential leakage of oil. Fences shall be provided with outlets for rain water drainage, provided that the volume of stored rain water shall be equivalent to the tank volume or complies with international specifications used in designing petrochemical storage tanks.
 - I- Compressed air shall be used in measuring and operating equipment, instead of compressed dry gas, whenever possible.
3. All equipment and machines used in the operations shall be in good working condition, fulfilling all necessary requirements for their efficient use, and of adequate capacity for the work they are designed for. Also, they shall carry out the necessary maintenance, servicing, and inspection operations.
 4. Gas accompanying the oil, which cannot be used or exploited safely, shall be disposed of according to relevant international standard specifications.
 5. Mechanical and chemical means shall be used and applied for extracting waste from wells or tanks at the highest possible rate, along with preparing pits or tanks to receive the remnants thereof after treatment in suitable safe locations far from wells or petroleum and industrial installations, and residences.

It is strictly prohibited to allow this waste to flow onto land, onto public roads, or into water courses, seas and their shores.

Article 44 During the performance of production, services, or other activities, especially when operating machines and equipment and using loud speakers and horns, all establishments or individuals shall not exceed permissible limits for the volume of sound inside places of work premises and in closed public places as indicated in table No. 1 of Annex 7 of these Executive Regulations.

Bodies granting permits shall give due consideration that the total volume of sounds emitted from fixed sources in a given area shall be within the permissible limits, and shall ensure that establishments have chosen appropriate machines and equipment to guarantee that these limits are complied with, as indicated in Table No. 2 of Annex 7 of these Executive Regulations, for terms of permissible limits for volume of sound and its time period of exposure.

Article 45 Establishment owners shall take the necessary precautions and arrangements, as set by the Ministry of Manpower and Employment, to ensure that there is no leakage or emission of air pollutants inside work premises except within the limits indicated in

Annex 8 of these Executive Regulations, whether resulting from the nature of establishment activities or from equipment malfunction. They shall provide the necessary means for protecting workers by implementing health and safety measures in the work place, including the choice of machines, equipment, substances, and types of fuel, as necessary. Periods of exposure to these pollutants shall also be taken into consideration. Adequate ventilation of places and the installation of chimneys and other air cleaning methods shall also be implemented.

Article 46 Establishment owners shall take necessary procedures to maintain temperature and humidity levels inside work premises within and not exceeding the maximum/minimum permissible limits. In case of work that requires operation beyond these limits of temperature or humidity, they shall ensure the provision of suitable protective means for workers such as special clothing and other protective means. Annex 9 of these Executive Regulations gives the maximum and minimum limits of temperature and humidity levels, the period of exposure thereto, and means of protection thereof.

Article 47 Closed and semi-closed public places shall have adequate ventilation systems appropriate to their sizes and their capacities, as well as to the type of activities exercised therein, to ensure the renewal of air, its cleanliness and the maintenance of a suitable level of temperature. The following table indicates the quantities of air necessary for ventilating public places:

QUANTITY OF EXTERNAL AIR* dm³/min/person	TYPE OF PLACE AND ACTIVITY
140 - 280	Places with high ceilings, banks, lecture halls, places of worship, large public places, theatres, non-smoking rooms
280 - 420	Apartments, hairdressers, beauty parlors, hotel rooms, rooms with limited smoking
420 - 560	Cafeterias, small restaurants, public work premises, hospital rooms, restaurants, rooms with medium level of smoking
560 - 850	Private work premises, offices, clinics, rooms with high levels of smoking
850 - 1700	Lecture halls, night clubs or crowded rooms with high levels of smoking

- * Without the use of air conditioners
- Suitable space for each person shall not be less than 4.25 m³
- Suitable floor area for each person shall not be less than 1.4 m³

Article 48 The head in charge of establishments shall take necessary procedures to prevent smoking in closed public places, except within areas allocated for smokers. Smoking in places

other than in these areas shall be considered an administrative infringement for which violators shall be liable to disciplinary action as applicable in given establishments.

Article 49 Radioactive levels or concentrations of radioactive substances in the air shall not exceed the permissible limits to be issued by decree by the Minister of Electricity and Power responsible for Nuclear Safety after referring to the Ministry of Health and the EEAA, within the period prescribed in Article 2 of Law No. 4 of 1994.

SECTION III

PROTECTION OF THE WATER ENVIRONMENT FROM POLLUTION

CHAPTER ONE

POLLUTION FROM SHIPS

Division One

Oil Pollution

Article 50 Ship owners, ship captains, or any other persons in charge of ships and those responsible for oil transport consignments within ports, territorial waters, or the exclusive economic zone of the Arab Republic of Egypt, and the companies operating in oil extraction, shall immediately notify the competent administrative bodies of every oil leakage incident upon its occurrence. Together with the notification they shall indicate the place of the accident, circumstances of the incident, type of leaking materials, quantities, and the procedures taken to stop or limit such leakage, with the provision that the notification shall include the following data:

1. Procedures taken for dealing with the leakage
2. Quantities and types of dispersants used
3. Probable source of leakage, and whether or not a fire has broken out
4. Direction in which the formed oil spill is moving
5. Rate of leakage, if ongoing
6. Dimensions of the oil spill
7. Wind velocity and speed, temperature, and extent of visibility
8. Direction of current speed, and water temperature
9. Condition of the sea
10. Tide status (overflowing, high, medium, weak)
11. Threatened coastal areas

12. Nature of the area: coral reefs - marine organisms
13. Reporting source:- name - telephone - address

In all cases, the competent administrative bodies shall notify the EEAA of all information on a given accident, upon its occurrence, in order to enable it to follow up the procedures taken, according to the responsibilities of the Agency, as prescribed in article No. 5 of the Law for the Environment.

Article 51 All shipping ports and ports ready to receive oil tankers, and shipping docks shall be provided with the necessary equipment to adequately receive unclean ballast water and residue wastewater from washing the tanks of oil tankers and other ships.

Ports shall be provided with lighters and containers necessary to adequately receive waste and oil residues as well as oil mixtures from ships docking in the harbor.

The competent administrative body shall receive any ship or tanker and direct it to disposal locations where it can dispose of its waste and unclean ballast water.

No ship or tanker shall be authorized to carry out loading and unloading operations except after referring to the competent administrative body to receive and direct it to locations for the disposal of waste and unclean ballast water.

Article 52 Every owner or captain of ships registered in the Arab Republic of Egypt and of ships of countries that are parties to the Convention shall maintain an oil register on ship. Officers in charge of ships shall record all operations involving oil, as indicated in the Convention, and particularly for the following operations:

- A- Loading, delivering, or other oil cargo transport operations, along with indicating the type of oil
- B- Disposal of oil or oil mixtures, to guarantee the safety of ships or their cargo, or the saving of lives, together with indicating the kind of oil
- C- Leakage of oil or oil mixtures as a result of collision or accident, along with indicating the percentage and volume of oil leakage
- D- Disposal and drainage of unclean ballast water, or tank washing water
- E- Disposal of waste pollutants
- F- Disposal of engine water that contains oil collected in the engine space outside the ship prior to the ship entering the harbor

Disposal and drainage operations of oil or oil mixtures from offshore platforms in a sea water environment shall be recorded in a special register conforming to the stipulated oil registry in this article.

This register shall contain the following data:

- A- Platform name and location
- B- The permit issued for it
- C- Name of the platform owner
- D- Platform activity
- E- Statement of the systems, equipment, apparatus, and units for oil and oil mixture treatment before drainage and disposal, and the system for controlling and monitoring these
- F- Quantities and kinds of substances and liquids authorized for drainage and disposal throughout the year, and their rates of disposal
- G- Actual quantities of substances and liquids drained and disposed of
- H- Statement of malfunctions, with respect to the system, equipment and apparatus, as well as the units of oil and oil mixture treatment, indicating the breakdown date, the breakdown period, and the results of analyses following repair
- I- Name and signature of the person in charge of filling in the data in the register
- J- Date of recording data

Article 53 A Guarantee Certificate must be presented when ships enter regional waters, in compliance with the provisions of Article 59 of the aforementioned Law for the Environment. This Certificate must be valid and must cover all damage and compensation to be estimated by the competent administrative body in agreement with the EEAA.

Division Two

Pollution by Sewage Waste and Garbage

Article 54 Ships and offshore platforms shall be prohibited from draining polluted wastewater inside the territorial waters and the exclusive economic zone of the Arab Republic of Egypt. This waste shall be disposed of according to the criteria and procedures indicated in the following:

Procedures for disposal and drainage of polluted wastewater from ships and offshore platforms:

Ships and offshore platforms, of all nationalities, shall observe the following criteria and norms when draining their wastewater:

- 1- Ships or offshore platforms shall have an international certificate for pollution prevention by wastewater drainage, with the provision that the certificate shall be valid

- 2- Ships shall be equipped with a wastewater drainage treatment unit
- 3- No ship is permitted to dispose of treated wastewater at a distance of less than four nautical miles from the shoreline
- 4- In case of ships disposing of this waste without treatment, they shall do so beyond a distance of 12 nautical miles from the shoreline

In all cases, no ship shall drain wastewater retained in the retention tanks, all at one time. Waste draining shall occur at moderate rates, while the ship is moving at a speed of not less than 4 knots/hour

No solid bodies of any kind shall result from the drainage operations nor shall they float or be visible in territorial water, nor shall the drainage of waste result in changing the color of this water

If drainage wastewater is mixed with remnants of water that requires treatment, such treatment shall be done before draining

The foregoing provisions shall not apply in case of drainage of waste for the ship's safety and for the safety of people on board, rescuing lives at sea, or as a result of the ship's breakdown or its equipment breakdown, provided all reasonable precautions have been taken to prevent such drainage or to reduce it before and after the occurrence of the breakdown

Article 55 The competent bodies shall provide the necessary facilities for receiving waste and polluted drainage water, as well as leftover waste from ships, provided these facilities shall be usable and in a well maintained condition, and that cleaning and purification shall be periodically carried out.

Article 56 The concerned authorities shall, in transporting the collected waste in the facilities prescribed in the previous article, give due consideration that this waste does not leak and that no odors are emitted from it. Disposal of this waste shall also take place at locations and in accordance with the standards prescribed in Law No. 38 for 1967 for Public Hygiene in coordination with the competent bodies and the local authorities.

CHAPTER TWO

POLLUTION FROM LAND BASED SOURCES

Article 57 It is mandatory to issue a permit for the construction of any installations or stores on or near the seashore that results in drainage of polluted materials in violation of the provisions of this Law, and of these Executive Regulations, and of the decrees issued for their implementation, so as to give due consideration to the articles of Section 1 Chapter 1 of these Executive Regulations. Permit owners shall provide suitable and adequate units for waste treatment. They shall begin operating them at the same time as starting to operate these installations. Furthermore, they shall secure their safety and maintain them periodically.

Article 58 Without prejudice to Article 2 of the decree issuing these Executive Regulations, industrial establishments that are authorized to drain decomposable pollutant substances into the water environment and beaches adjacent thereto, shall not drain these substances except after treating them in accordance with the specifications and criteria prescribed in Annex 1 of these Executive Regulations.

The Ministry of Health laboratories shall carry out periodic analyses of treated liquid waste samples and notify the competent administrative body of the results of these analyses.

In case the results of any analysis do not conform to specifications and criteria as prescribed in Annex 1, the EEAA shall be notified to take administrative procedures, jointly with the competent administrative body. They will consider granting the concerned party, who holds a permit to perform his activities according to the provisions of these Executive Regulations, a grace period of one month to treat the waste so as to conform to the determined specifications and criteria. Due consideration will be given to the periods prescribed in Article 2 of the decree issuing these Executive Regulations with regard to establishments existing at the time of issuance. If treatment does not take place within the period prescribed above, or if it is proved from the analysis during that period that the continuation of drainage is likely to cause harm and damage to the water environment, disposal of waste shall be administratively discontinued, and the permit issued for the establishment shall be withdrawn, without prejudice to the penalties prescribed in the Law for the Environment. Industrial establishments shall also be prohibited from draining non-decomposable pollutant substances into the water environment as prescribed in Annex 10 of these Executive Regulations.

Article 59 It shall be prohibited to issue permits for the construction of any installations on the sea shores of the Arab Republic of Egypt up to a distance of two hundred meters inwards from the shoreline, except after obtaining the approval of the Egyptian General Authority for Protection of Beaches, in coordination with the EEAA.

The following procedures shall be followed when issuing permits for the construction of these installations:

A- The application shall be submitted in writing to the concerned coastal governorate (the authority to grant the proposed permit), indicating the type of establishment to be built within the prohibited zone, provided the application has an attached integral study assessing the environmental impact of the project or new works required 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

Along with the application there will be a detailed statement of precautions proposed to avoid or treat these effects as applicable.

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- Representative from the Ministry of Defense:Member
- Representative from the Ministry of Petroleum:Member
- Representative from the competent administrative:Member
body within the jurisdiction of where the
litigation has occurred

The committee may resort to one or more experts in environmental affairs concerned with water.

This committee shall be competent for examining and issuing a final decision on the administrative litigation arising from the application of the provisions of Section 3 of these Executive Regulations. The committee shall issue its decision after hearing the statements of the two parties, with a simple majority of votes of attending members deciding. In case of a tie vote, the Chairman shall cast the deciding vote.

Concerned parties may contest the decision of the committee before the Administrative Courts of the State Council.

- Article 63** The competent administrative bodies may request the assistance of each of the Ministry of Defense, the Ministry of the Interior, the Ministry of Petroleum, the Suez Canal Authority, and the Ministry of Maritime Transport, or any other concerned authority, in implementing the provisions of Section 3 of these Executive Regulations according to the conditions of which a decree shall be issued by the competent Minister for Environmental Affairs.

SECTION IV

FINAL PROVISIONS

- Article 64** The cost of removing the effects of violations prescribed in Article 91 of the Law for the Environment shall be determined according to the following norms:

- A- The unloading proximity or distance from the shore, and in particular from areas of economic or touristic importance or from Natural Reserves
- B- Degree of toxicity of unloaded substances
- C- Volume of pollutants, types and their detrimental effects on the environment

- Article 65** Every citizen or association concerned with environmental protection may resort to the administrative or judiciary agencies for the purpose of applying the provisions of the Law for the Environment and of these Executive Regulations. The Ministry of the Interior, in coordination with the EEAA, shall form a police force specialized in

environmental protection within the Ministry and Security Departments in the governorates, which shall be competent for the enforcement of the provisions of laws and decrees connected with environmental protection, and shall receive complaints and notifications submitted in this respect, and shall also be entrusted to take legal procedures in respect thereof.

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

Annex No.	Subject
1	Limits and specifications for draining and disposing of certain substances in the marine environment
2	Establishments subject to environmental impact assessment
3	Model register for the impact of establishment activities on the environment (register of environmental conditions)
4	Wild birds and animals that are prohibited to be shot, hunted, killed or trapped
5	Maximum limits of outdoor air pollutants
6	Permissible limits of air pollutants in emissions
7	Permissible limits of sound intensity and safe exposure periods
8	Maximum limits of air pollutants inside work premises according to industry type
9	Maximum and minimum limits for temperature and humidity, and exposure periods as well as means of protection
10	Non-degradable polluting substances prohibited from discharge into the marine environment by industrial establishments

ANNEX 1

LIMITS AND SPECIFICATIONS FOR DRAINING AND DISPOSING OF CERTAIN SUBSTANCES IN THE MARINE ENVIRONMENT

Giving due consideration to the provisions of Law No.48 of 1982 concerning the protection of the River Nile, and its Executive Regulations, the amounts of drained substances indicated hereunder shall not exceed the limits indicated next to each of them.

In all cases, draining into the marine environment shall not be permissible except at a minimum distance of 500 meters from the coast line. Nor shall drainage be permitted in fishing zones or swimming zones or in the natural reserves in order to maintain the economic or esthetics values of the zones.

PARAMETER	MAXIMUM LIMITS AND SPECIFICATIONS (mg/l - unless otherwise indicated)
Temperature	Not more than 10 degrees over existing level
pH	6 - 9
Color	Free of colored agents
Biochemical Oxygen Demand	60
Chemical Oxygen Demand (Dichromate)	100
Total Dissolved Solids	2000
Fixed (Ash of) Dissolved Solids	1800
Suspended Solids	60
Turbidity	NTU 50
Sulfides	1
Oils and Grease	15
Hydrocarbons, of oil origin	0.5
Phosphates	5
Nitrates	40
Phenolates	1
Fluorides	1
Aluminum	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
PARAMETER	MAXIMUM LIMITS

	AND SPECIFICATIONS mg/1 - unless otherwise indicated)
Manganese	1
Zinc	5
Silver	0.1
Barium	2
Cobalt	2
Pesticides	0.2
Cyanide	0.1
Fecal Coliform Count (No. in 100 ml)	5000

ANNEX 2

ESTABLISHMENTS SUBJECT TO ENVIRONMENTAL IMPACT ASSESSMENT

These establishments are defined according to the following basic standards:

- First : An establishment's type of activities
- Second : Extent of an establishment's use of natural resources, especially water, agricultural lands, and mineral wealth
- Third : Establishment site
- Fourth : Kind of energy used in operating an establishment

First: Type of Establishment Activities:

1. Industrial establishments subject to 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 travel and 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, exploration, refining, storing, and transport, that are 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 pipeline agreements
4. The production and generation of electricity by stations that are subject to the provisions of:
 - * Law No. 145 of 1948 concerning the establishment of the Cairo Electricity and Gas Administration
 - * Law No. 63 of 1974 concerning the electricity sector installations
 - * Law No.12 of 1976 concerning the installation of the Egyptian Electricity Authority

- * Law No. 13 of 1976 concerning the installation of the Nuclear Power Generation Stations Authority
 - * Law No.27 of 1976 concerning the installation of the Rural Electricity Authority
 - * Law No. 102 of 1986 concerning the installation of the Authority for the Development and Utilization of New and Renewable Energy.
5. Companies operating mines and quarries, and in the production of building materials, that 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 stations for sanitary drainage, treatment, and re-use of water, or treatment of agricultural drainage water, irrigation projects, roads, bridges, barrages, tunnels, airports, sea ports, railway stations, and others.
 7. Any other establishment, activity, or project that is likely to produce a market impact on the environment and for which a decree shall be issued by the EEAA with the agreement of the concerned administrative body.

Second: Establishments Subject to the Assessment of Environmental Impact, according to their Locations

Including those which are set up on the Nile banks, its branches, the main canals, or in tourist and monument areas, in areas which are densely populated or on sea shores, and lakes, or in the Natural Reserve Areas.

Third: Extent of an Establishment's Use of Natural Resources

Including those that cause the dredging of agricultural land, desertification, destruction of trees and palm trees, or pollution of water resources, especially the River Nile, its branches, lakes, or subterranean water.

Fourth: Type of Energy Used for Operating an Establishment

1. Fixed establishments operated and run by conventional fuel and their emissions that exceed permissible limits
2. Establishments using nuclear power for their operation.

ANNEX 3

MODEL REGISTER FOR THE IMPACT OF ESTABLISHMENT ACTIVITIES ON THE ENVIRONMENT (REGISTER OF ENVIRONMENTAL CONDITIONS)

1. Establishment name and address

2. Name of person in charge of recording data in the Register and his job title
3. Time period covered by the current data
4. Type of activities and nature of primary raw materials used, and production during the corresponding time period
5. Legislation to which the establishment is subject
6. Special conditions set by the EEAA concerning the establishment
7. Statement of the types of emissions, the rates of drainage (per hour/per day/per month/per year), and method of disposal thereof:-
 - 7.1 Gaseous emissions
 - 7.2 Liquid emissions
 - 7.3 Solid emissions
 - 7.4 Other emissions
8. Frequencies of carrying out tests on all types of emissions from the establishment:
 - 8.1 Random samples for testing:
 - * Date, time and place of each sample
 - * Frequency of sample collection
 - * Statement of parameters to be measured (daily/weekly/monthly)
 - 8.2 Samples of compound waste:
 - * Date and time of sample collection
 - * Locations and percentages of the mixture in the compound sample
 - * Statement of parameters to be measured (daily/weekly/monthly).
9. Extracted materials after treatment processes.
10. Extent of efficiency of treatment measures.
11. Date and signature of officer in charge.

ANNEX 4

WILD BIRDS AND ANIMALS THAT ARE PROHIBITED TO BE SHOT, HUNTED, KILLED, OR TRAPPED

First:

- A- Birds and animals stated on the list attached to the decree by the Minister of Agriculture No.28 of 1967, issued in implementation of the provisions of article No.117 of Law No.53 of 1966, promulgating the Law on Agriculture.
- B- Any other birds or animals to be determined by International Conventions to which the Arab Republic of Egypt is a party.
- C- Any other birds or animals for which a decree shall be issued by the Minister of Agriculture with the Agreement of EEAA.

Second: Areas In which the Hunting and Shooting of these Birds and Animals is Prohibited

- A- Areas indicated by virtue of the Minister of Agriculture's Decree No.472 of 1982:

It is prohibited to shoot and hunt various kinds of birds and animals in the following areas of the two governorates of Sinai:
 - El Zalaniq, Sab Khet Al Bardaweel, and Al Tinah
 - St. Katherin and Mount Serial
 - Tiran Island
Bird hunting and fishing, including sea shells, corals, oysters, and other marine creatures, shall be prohibited in the area between Taba and Ras Mohammed in the Gulf of Aqaba by using fishing nets, or by explosives.
- B- Natural Reserves as defined by the Prime Minister's decrees in enforcement of Law No. 102 of 1983
- C- Regulation of hunting in North Sinai, by virtue of the Governor's Decree No. 442 of 1980
- D- Regulation of hunting in South Sinai by virtue of the Governor's Decrees No.15 of 1980, and No.16 of 1980.
- E- Areas as specified by International Conventions to which the Arab Republic of Egypt is a party.
- F- Any other areas to be defined by a decree from the concerned Authority in coordination with the EEAA.

ANNEX 5

MAXIMUM LIMITS OF OUTDOOR AIR POLLUTANTS
(micrograms/m³)

POLLUTANT	MAXIMUM LIMIT	EXPOSURE PERIOD
Sulphur Dioxide	350 150 60	1 hr 24 hrs 1 year
Carbon Monoxide	30 mg/m ³ 10 mg/m ³	1 hr 8 hrs
Nitrogen Dioxide	400 150	1 hr 24 hrs
Ozone	200 120	1 hr 8 hrs
Suspended Particulates (To be measured as black smoke)	150 60	24 hrs 1 yr
Total Suspended Particulates	230 90	24 hrs 1 yr
Thoracic Particles (PM 10)	70	24 hrs
Lead	1	1 yr

ANNEX 6

PERMISSIBLE LIMITS OF AIR POLLUTANTS IN EMISSIONS

This annex refers to gaseous, solid, or liquid air pollutants emitted by different establishments within certain periods of time that result in harm and damage to public health, animals, plants, materials, or properties, or that interfere with people's daily lives. The emission of pollutants at concentrations higher than these is therefore considered air pollution in excess of the maximum permissible limits for outdoor air.

TABLE 1 TOTAL PARTICULATES

NO.	KIND OF ACTIVITY	MAXIMUM LIMIT FOR EMISSIONS (mg/m³ in exhaust)
1-	Carbon Industry	50
2-	Coke Industry	50
3-	Phosphate Industry	50
4-	Ingots Industry, 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-	Industrial Timber and Fibers	150
8-	Petroleum Industries and Oil Refining	100
9-	Other Industries	200

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

	POLLUTANT	MAXIMUM LIMITS FOR EMISSIONS (mg/m³ in exhaust)
*	Aldehydes (measured as formaldehyde)	20
*	Antimony	20
*	Carbon Monoxide	500 Existing 250 New
*	Sulphur Dioxide Burning Coke and Petroleum Non-ferrous Industries Sulfuric acid Industry	4000 Existing 2500 New 3000 1500
*	Sulfur trioxide in addition to sulfuric acid	150
*	Nitric Acid Nitric Acid Industry	2000
*	Hydrochloric Acid (Hydrogen Chloride)	100
*	Hydrochloric Acid (Hydrogen Fluoride)	15
*	Lead	20
*	Mercury	15
*	Arsenic	20
*	Heavy elements (total)	25
*	Silicon Fluoride	10
*	Fluorine	20

	POLLUTANT	MAXIMUM LIMITS FOR EMISSIONS (mg/m³ in exhaust)
*	Tar Graphite Electrode Industry	50
*	Cadmium	10
*	Hydrogen Sulfide	10
*	Chlorine	20
*	Carbon Garbage Burning Electrode Industry	50 250
*	Organic Compounds Burning of Organic Liquids Oil Refining	50 0.04% of crude
*	Copper	20
*	Nickel	20
*	Nitrogen Oxides Nitric Acid Industry	3000 Existing 400 New
*	Other Industries	300

ANNEX 7

PERMISSIBLE LIMITS OF SOUND INTENSITY AND SAFE EXPOSURE PERIODS

* Intensity of sound inside work premises and closed places

TABLE 1 Maximum permissible limits of sound intensity inside
places of productive activities

No.	TYPE OF PLACE/ACTIVITY	MAXIMUM ALLOWABLE SOUND LEVEL DECIBEL (A)
1	Work premises with up to 8 hour shifts with the aim of limiting noise hazards on hearing	90
2	Places of work that require hearing signals and good audibility of speech	80
3	Places of work for the follow up, measuring and adjustment of operations, with high performance	65
4	Places of work with computers or typewriters or similar equipment	70
5	Places of work for activities that require routine mental concentration	60

The maximum permissible periods for exposure to noise at work premises (factories and workshops) are as follows:

- * The values given hereafter are indicated on the basis of those which do not affect the sense of hearing.
- Intensity of noise shall not exceed 90 decibels (A) during a daily work shift (8 hours).
- In case the noise intensity is higher than 90 decibels (A), the period of exposure shall be reduced according to the following table:

NOISE INTENSITY LEVEL DECIBEL (A)	95	100	105	110	115
PERIOD OF EXPOSURE) (HOURS)	4	2	1	½	¼

- The noise intensity at any one time during working hours shall not exceed 135 decibels.

- In case of exposure to various intensities of noise over 90 decibels the following applies:

For intermittent periods of noise during a shift, the total of

$$\left(\frac{A_1}{B_1} + \frac{A_2}{B_2} + \dots = \right)$$

shall not exceed the number one, where

- A = is the period of exposure to a specific level of noise per hour
- B = is the permissible period of exposure at that specific noise level per hour

- In case of exposure to intermittent noise coming from heavy hammers, the exposure period (number of knocks during the daily shift) permitted depends on the noise intensity, according to the following table:

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

Noise coming from heavy hammers shall be considered intermittent if the period between knocks is one second or more. If the period is less than this, the noise shall be considered continuous, in which case the previous four conditions shall apply.

TABLE 2**Maximum permissible limits for noise intensity in different zones**

TYPE OF ZONE	PERMISSIBLE LIMITS FOR NOISE INTENSITY DECIBEL (A)					
	D A Y		E V E N I N G		N I G H T	
	from	to	from	to	from	to
Commercial, administrative and downtown area	55	65	50	60	45	55
Residential areas including some workshops or commercial businesses on public roads	50	60	45	55	40	50
Residential areas in the city	45	55	40	50	35	45
Residential suburbs having low traffic flow	40	50	35	45	30	40
Rural residential areas (Hospitals and gardens)	35	45	30	40	25	35
Industrial areas (Heavy Industries)	60	70	55	65	50	60

Day time: from 7 am to 6 pm

Evening time: from 6 pm to 10 pm

Night time: from 10 pm to 7 am

**MAXIMUM LIMITS OF AIR
POLLUTANTS INSIDE WORK PREMISES
ACCORDING TO INDUSTRY TYPE**

Limits are given for the concentrations of chemical substances in the air to which workers may be exposed day after day without the development of hazards to health. These are divided into three kinds:

1- **Mean time exposure limit:**

The limit to which workers may be exposed on each ordinary working day (8 hours) for 5 days a week throughout the period of their working life without the occurrence of any health impairments.

2- **Short term exposure limit:**

The limits to which workers may be continuously exposed for short time periods. The limit for each short term exposure is for a period of 15 minutes and may not be exceeded at any time during the working period. It shall not be repeated more than four times on the same day. The period between each short term exposure and the next one shall be at least sixty minutes.

3- **Ceiling limit:**

The ceiling limit shall not be exceeded even by a moment.

When absorption through skin is a factor in increasing exposure, the remark "+ skin" is recorded next to the limits. Concerning dust that merely causes annoyance without tangible harmful health effects, the limit shall be 10 mg/m³ for inhalable particles. Concerning simple asphyxiant gases that have no significant physiological effects, the influencing factor shall be the oxygen concentration in the atmosphere which shall not be less than 18%.

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
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
Acetylene Tetrabromide	1	15	1.5	20	
Acetyl Salicylic Acid (Asprini)		5			
Acrolein	0.1	0.25	0.3	0.8	
Acrylamide		0.3		0.6	+ skin
Acrylic Acid	10	30			
Acrylonitrile	2				+ skin
Aldrin		0.25		0.75	+ skin
Allyl Alcohol	2	5	4	10	+ skin
Allyl Chloride	1	3	2	6	
Metal Aluminum and its Oxides	10		20		
Pyro Powders	5				
Soldering Smoke Fumes	5				
Soluble Salts	2				
Alkylates	2				
Amino Pyridine	5.5	2	2	4	
Ammonia	25	18	35	27	

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
Ammonium Chloride (Fumes)		10		20	
Amyl Acetate - Normal	100	530	150	800	
Amyl Acetate - Secondary	125	670	150	800	
Aniline and analogous	2	10	5	20	+ skin
Antimony and its compounds (counted as Sb)		0.5			
ANTU		0.3		0.9	
Arsenic and its soluble compounds (counted as Arsenic)		0.2			
Arsenic Gas	0.05	0.2			
Petroleum Asphalt Fumes		5		10	
Atrazine		5			
Azinphos Methyl		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	

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
Bismuth Telluride		10		20	
Anhydrous Tetra Sodium Borate		1			
Deca Hydrates		5			
Penta Hydrate		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 Penta Fluoride	0.1	0.7	0.3	2	
Bromoform	0.5	5			
Butadiene	1000	2200	1250	2750	
Butane	800	1100			
Butyl Acetate N	150	710	200	150	
Butyl Acetate Secondary	200	950	250	1190	
Butyl Tri Acetate	200	950	250	1190	
Butyl acrylate	10	55			
Butyl Alcohol N	50	150			+ skin
Butyl Alcohol Second	100	305	150	450	
Tri Butyl Alcohol	100	300	150	450	
Butyl Amines	5	15			+ skin

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
Tetra Butyl Chromate (counted as Chromium Oxide - CrO ₃)		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 Fumes	0.05				ceiling
Calcium Carbonate				20	
Calcium Hydroxide		5			
Calcium Oxide		2			
Carbaryl		5		10	
Carbofuran		0.1			
Carbon Black		3.5		7	
Carbon Dioxide	5000	9000	15000	27000	
Carbon Disulfide	10	30			+ skin
Carbon Monoxide	50	55	400	440	
Carbon Tetra Chloride	5	30	20	125	
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	

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
Chlorine Dioxide	0.1	0.3	0.3	0.9	
Chloro Acetaldehyde	1	3			ceiling
Chlorobenzene	75	350			
Chloro Diphenyl (42% Chlorine)		1		2	
Chloro Diphenyl (45% Chlorine)		0.5		1	
Chloroform	10	50	50	225	
Dichloro Methyl Ether	0.001	0.005			
Chloropicrin	10	45			
Chlorthiophos		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 Soluble In Benzene		0.2			
Cobalt and Cobalt Dust and Fumes		0.1			
Copper Fumes		0.2			

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
Copper Dust and Mists (counted as Copper)		1		2	
Raw Cotton Dust		0.2		0.6	
Cresolate	5	22			+ skin
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			
Dichloroacetylene	0.1	0.4			ceiling
Ortho Dichlorobenzene	50	300			ceiling
Para-Di-Chlorobenzene	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

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
Dicrotophos		0.25			+ skin
Dieldrin		0.25		0.75	+ skin
Diathanolamine	3	15			
Di Methyl Aniline	5	25	10	50	+ skin
Dinitro Benzene	0.15	1	0.5	3	+ skin
Dinitro Orthocresol		0.2		0.6	+ skin
Di-Nitrotoluene		1.5		5	+ skin
Dioxin	25	90	100	360	+ skin
Di Propylene Glycol (Methyl Ether)	100	600	150	900	+ skin
Diquat		0.5		1	
Diselvirum		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			
Ethanol Amine	3	8	6	15	
Ethyl Benzene	100	435	125	545	
Ethyl butyl ketone	50	230	75	345	
Ethyl Chloride	1000	2600	1250	3250	
Ethylene Dichloride	10	40	15	60	
Ethylene diamine	10	25			
Ethylene Oxide	10	20			
Ethylene Dichloride	10	40	15	60	

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
Ethylene Glycol Particles		10		20	
Vapor	50	125			ceiling
Ethyl Mercaptan	0.5	1	2	3	
Ferrous Vanadium Dust		1		0.3	
Glass Fiber Dust		10			
Fluorides (counted on the basis of Fluorine)		2.5			
Fluorine		2	2	4	ceiling
Formaldehyde	2	3			ceiling
Formic Acid	5	9			
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			
Hexane Isomers	500	1800	1000	3600	
Hydrogen Bromide	3	10			
Hydrogen Cyanide	10	10			ceiling
Hydrogen Fluoride	3	2.5	6	5	
Hydrogen Sulfide	10	14	15	21	
Iodine	0.1	1			ceiling

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
Iron Oxide Fumes (counted as Iron)	3	5		10	
Isopropyl Alcohol	400	980	500	1225	
Iron Penta Carbonyl	0.1	0.8	0.2	0.16	
Isobutyl Alcohol	50	150	75	225	
Lead Dusts and Fumes Non Organic (as Lead)		0.15		0.45	
Lead Arsenate		0.15		0.45	
Lead Chromate		0.05			
Lindane		0.5		0.5	+ skin
Liquid Petroleum Gases	1000	1800	2250		
Magnesium Oxide Fumes		10			
Malathion		10			+ skin
Manganese Dust and Compounds (as Manganese)		5			ceiling
Manganese Fumes		1		3	
Manganese Tetra Oxide		1			
Mercury (as Mercury)					+ skin
Alkyl Compounds	0.01		0.03		
Fumes of all other Compounds Except Alkyl		0.05			

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
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	
Methylene-Ketone Butyl	5	20			
Methyl Chloride	50	105	100	205	
Methyl Chloroform	350	1900	450	2450	
Divinyl Methylene					
MDI Isocyanide	0.02	0.2			ceiling
Methylene Chloride	100	360	500	1700	
Ethyl Methyl Ketone	200	590	300	885	
Hydrazide Methyl	0.2	0.35			+ skin
Isocyanide Methyl	0.02	0.05			+ skin
Mercaptan Methyl	0.5	1			
Parathion Methyl		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			

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
Soluble Compounds of Nickel		0.1		0.3	
Nicotine		0.5		1.5	+ skin
Nitric Acid	2	5	4	10	
Nitric Oxide	25	30	35	45	
p-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	
Nitroglycerine	0.02	0.2	0.05	0.5	+ skin
Nitrotoluene	2	11			+ skin
Octachloronaphthalene		0.1		0.3	+ skin
Mineral Oil mist		5		10	
Osmium Tetra Oxide (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 Fumes		2		6	
Bronchial (Size of Inhalable Particles)		0.1			
Parathion		0.1		0.3	+ skin

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
Naphthalene Pentachloride		0.5		2	
Pentachlorophenol		0.5		1.5	+ skin
Ethylene Dichloride	50	325			
Phenol	5	19	10	38	+ skin
Phenothiazine		5		10	+ skin
p-Phenylenediamine		0.1			+ skin
Phenyl hydrazide	5	20	1	45	+ skin
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			
Platinum Salts (soluble as Platinum)		0.002			
Potassium Nydroxide		2			ceiling
Propionic Acid	10	30	15	45	
Propyl Alcohol	200	500	250	625	+ skin
Pyrethrins		5		10	
Pyridine	5	15	10	30	
Rotenone		5		10	
Selenium Salts (Oxilinium)		0.2			

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
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 Disulfide		5			
Sodium Fluoroacetate		0.05		0.15	+ skin
Sodium Hydroxide		2			ceiling
Sodium Metabisulfite		5			
Stilbene	0.1	0.5	0.3	1.5	
Protein Decomposing Enzymes (100% Pure Crystalline Enzymes)		0.00006			ceiling
Sulfur Dioxide	2	5	5	10	
Sulfuric Acid		1			
Sulfur Hexafluoride	1000	6000	1250	7500	
Sulfur Monochloride	1	6	3	18	
Sulfur Pentafluoride	0.025	0.25	0.075	0.75	
2, 4, 5 - T		10		20	
TEPP	0.004	0.05	0.01	0.2	+ skin
1, 1, 2, 2, Tetra Chloroethane	5	35	10	70	+ skin

	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
Tetra Lead Ethyl (as Lead)		0.1		3	+ skin
Tetryl		1.5		3	+ skin
Soluble Thallium Salts (as Thallium)		0.1			+ skin
Thiram		5		10	
Tin and its Inorganic Compounds (except Tin Tetra Oxide) (as Tin)	0.1		0.2		+ skin
Tin Organic Compounds (as Tin)	0.1		0.2		+ skin
Titanium Dioxide				20	
Toluene	100	375	150	560	+ skin
Toluene Di Isocyanide	0.02	0.14			ceiling
Orthotoluidine	2	9			
Trichloro acetic acid	1	5			
1, 2, 4 - Trichloro Benzene	5	40			
Trichloro ethylene	50	270	150	805	
Naphthalene Trichloride		5		10	
2, 4, 6 - Trinitrotoluene		0.5		3	+ skin
Trimethyl Benzene	25	125	35	170	
Tri-Phosphate Orthocresol		0.1		0.3	

SUBSTANCE	EXPOSURE LIMITS				Remarks
	Mean Time		Short Term		
	ppm	mg/m ³	ppm	mg/m ³	
Natural Uranium and its Soluble and Non-Soluble Compounds (as Uranium)		0.2		0.6	
Inhalable Vanadium Dusts and Fumes (counted at Vn)					
Vanadium Oxide		0.5			
Vinyl Chloride	5	10			
Warfarin		0.1		0.3	
Soldering Fumes		5			
Solid Timber Dusts		1			
Soft Timber Dusts		5		10	
Xylene	100	435	150	635	+ skin
Zinc Chloride Fumes		1		2	
Zinc Oxide Fumes		5		10	
Zirconium Compounds (Counted as Zirconium)		5		10	

MINERAL DUSTS

1. SILICA - SILICON DIOXIDE:

A- Crystalline:

Quartz limit:

$$= \frac{300 \text{ million particles per cubic foot}}{\text{percentage of Quartz concentration in dust} + 10}$$

- **Inhalable** (less than 5 microns) dust limit:

$$= \frac{10 \text{ mg per cubic meter}}{\text{percentage of Quartz concentration in dust} + 2}$$

- **Total dust limit**

$$= \frac{30 \text{ mg per cubic meter}}{\text{percentage of Quartz concentration in dust} + 3}$$

- **Crystobalite and Tridimite limits:**

Half the value calculated for Quartz shall be used

B- Non Crystalline:

= **Limit:** 20 million particles per cubic foot.

2. ASBESTOS: Limits for asbestos dusts with fiber lengths greater than 5 microns:

AMOSITE	0.5 fibers per cm ³ of air
CROCIDOLITE	0.2 fibers per cm ³ of air
OTHER KINDS	2 fibers per cm ³ of air

3. TALC:

FIBROUS TYPE	2 fibers per cm ³ of air
NON FIBROUS TYPE	20 million particles per cubic foot of air

4. air

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

6. **COAL:**

- Inhalable Dust:

If the percentage of silica is less than 5%:

= 20 million particles per cubic foot of air¹

If the percentage of silica is greater than 5%:

= $\frac{10 \text{ mg/m}^3}{\text{Percentage of silica in inhalable dusts} + 2}$

If less than 1% quartz:

Limits for total dusts = 30 million particles per cubic foot
= 10 mg per cubic meter

Limits for inhalable dusts = 5 mg per cubic meter

If the percentage of quartz exceeds 1%, the limits for quartz are applicable.

EXAMPLES of nuisance dusts:

- ALUMINA
- CALCIUM CARBONATE
- MARBLE LIMESTONE
- CALCIUM SILICATE
- PORTLAND CEMENT
- SYNTHETIC GRAPHITE
- GYPSUM - CALCIUM SULFATE
- MAGNESIUM SULFATE
- KAOLIN
- METALLURGICAL WOOL FIBERS
- ZINC OXIDE
- CELLULOSE FIBERS
- MISTS OF VEGETABLE OILS - EXCEPT IRRITATING OILS

Limits For Raw Cotton Dust:

Mean time limit = 0.2 mg/m³

Short term limit = 0.6 mm/m³

LIMITS FOR CARCINOGENS

¹* Millions of particles per cubic foot x 35.5

= a million particles per cubic meter

= one particle per cubic centimeter

SUBSTANCE	LIMITS	REMARKS
Acrylonitrile	2 ppm	+ skin
Asbestos	See mineral dusts	
Bis Chloro Methyl Ether	0.001 ppm	
Chromate (Clearing Chromate Ore)	0.05 mg/m ³	as Chromium
Hexavalent Chromium - some compounds that are non-soluble in water	0.05 mg/m ³	as Chromium
Volatile Materials in Coal Tar	0.2 mg/m ³	as materials soluble in benzene
Nickel Dusts and Fumes	0.1 mg/m ³	as Nickel
Acidified Nickel Sulfide	5 ppm	
Vinyl Chloride	10 ppm	
Benzene	2 mg/m ³	
Beryllium	5 ppm	+ skin
Carbon Tetrachloride	10 ppm	
Chloroform	0.1 ppm	+ skin
Hydrazide	5 ppm	+ skin
Hydrazide Vinyl	0.5 ppm	+ skin
Hydrazide Dimethyl (1,1)	0.2 ppm	
Dimethyl Sulfate	0.1 ppm	+ skin
Hydrazide Methyl	upper limit	+ skin
Ethylene Oxide	1 ppm	
Formaldehyde	1 ppm	
Hexa Chlorobutadiene	0.02 ppm	
Methyl Iodide	2 ppm	+ skin
2 - Nitropropane	10 ppm	

SUBSTANCE	LIMITS	REMARKS
beta-Propiolactone	0.5 ppm	
Aminopropylene	2 ppm	+ skin
o-Tolidine	2 ppm	+ skin
Vinyl Bromide	5 ppm	
Vinyl Dioxide	10 ppm	
Cyclohexene		

**THAT WORKERS ARE NOT ALLOWED
TO TOUCH OR DEAL WITH IN ANY WAY**

- 1- **Octapheneyl Amino (Paraseny Amino)**
 - Benzidine
 - Chloromethyl ether
 - Beta-naphthylamine

- 2- **Dinitro Phenyl**

**INDUSTRIAL MATERIALS OR OPERATIONS SUSPECTED
OF BEING CARCINOGENIC**

Amitrole
Production of Antimony Trioxide
Production of Arsenic Trioxide
Benzol (A) Pyrene
Production of Cadmium Oxide
3,3 - Dichloro Benzidine
Carbamyl Chloride Dimethyl
Ethylene Dibromide
Phosporamide Hexamethyl
N-Nitrosodimethylamine
N-Amino Phenyl Beta Naphthol

Ventilation aims to maintain the concentration of pollutants below permissible maximum limits. The provision of adequate ventilation inside work premises shall be accomplished in two ways:

- 1- General ventilation

- 2- Local ventilation

1. General Ventilation

General ventilation is a suitable method for the treatment of solvent fumes of low toxicity. It is not suitable for highly toxic substances nor for pollutants that are irregularly emitted or in large quantities. It is generally not suitable for dealing with dust and fumes.

General ventilation systems shall be designed after identifying the volumes of evaporated substances and computing the required volumes of air that need to be moved to cause a change of air that is sufficient to maintain concentrations of pollutant substances below the maximum permissible limits. The technical engineering aspects shall be taken into consideration when establishing the ventilation system. Specialized engineers shall supervise the execution of this system, and shall use the recommendations set forth in for following reference book:

American Conference of Governmental Industrial Hygienists, Committee on Ventilation, Industrial Ventilation. A Manual of Recommended Practice, 13th Ed. A.C.G.I.H., Lansing, MI, 1974.

2. Local Ventilation

Local ventilation is more effective in controlling different types of pollutants. It consists of a hood, a set of pipes, and an air purifying apparatus that cleans the air before its emission to the outside, together with a fan to keep the air in motion. Whatever the design of the hood might be, the speed of air at the pollution point source should be sufficient to remove it before being dispersed into the work premises.

Technical and engineering aspects should be taken into consideration in designing the local ventilation system and implementation by specialized engineers, making use of the above mentioned reference for general ventilation.

Whenever general and local ventilation systems are used, maintenance should be supervised periodically by specialized engineers and efficiency measurements should be carried out during the periodical maintenance.

ANNEX 9

MAXIMUM AND MINIMUM LIMITS FOR TEMPERATURE, AND EXPOSURE PERIODS AS WELL AS MEANS OF PROTECTION

- 1- Workers shall not be exposed to conditions of high temperature during two working hours on the same day, as indicated in the table, as determined with the wet black thermometer measurement:

TYPE OF WORK	LOW AIR FLOW	HIGH AIR FLOW
LIGHT WORK	30°	32.2°C
MEDIUM WORK	27.8°C	30.5°C
HARD WORK	26.1°C	28.9°C

- 2- No worker shall work without precautionary monitoring when exposed to levels of high temperature.
- 3- If any worker is exposed to heat stress under working circumstances for a period of one continuous or intermittent hour during two working hours, exceeding 26.1°C for men and 24.5°C for women, one or more of these methods shall be referred to in order to guarantee that a worker's internal temperature shall not rise above 38°C:
- A- Acclimatizing workers to high temperatures for a period of six days by exposing the worker to 50% of the daily exposure period on the first working day. The period of exposure shall be increased by 10 per cent daily, reaching 100% on the sixth day.
- B- Workers who are absent for a period of nine or more days, after being acclimatized to high temperature, or who fall sick for a period of 4 successive days, shall be re-acclimatized during a period of 4 successive days, so that the thermal load for a period shall be 50% of the daily exposure period, and will be increased 20 per cent daily, reaching 100% of the exposure on the fourth day.
- 4- Working hours shall be organized to reduce psychological stress on workers and enable them to acquire adequate rest between work shifts.
- 5- _____ same day.
- 6- Jobs involving heat stress shall be scheduled for the coolest part of the day.
- 7- There shall be short rest periods at least once every hour to enable workers to drink salted water with each worker to be given a minimum of 2 liters of potable water in which 0.1% salt is dissolved (workers will not be given salt pills). It is imperative that water is available to workers at a maximum distance of 60 m.
- 8- Protective clothing, gear and equipment suitable to the work shall be provided and used.
- 9- All engineering precautions, designs, monitoring and steps to carry out that ensure reduction of

the air temperature shall be observed.

Medical Considerations:

- Workers working under heat stress shall be examined to ascertain their fitness for this exposure with thorough examination of the cardiovascular, respiratory and urinary systems, the liver, and endocrine glands, and the skin, as well as the medical history especially in terms of heat related diseases.
- Periodic medical examination every two years for workers below the age of 46 who are exposed to high temperatures and every year for older workers.
- Presence of a trained staff to observe and confront cases and diseases resulting from heat stress during work, in addition to the availability of necessary First Aid kits.

Training

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

- 1- The importance of drinking water during work.
- 2- The importance of having salts.
- 3- The importance of daily weighing of ----- work and at the end of the duty.
- 4- The symptoms of the most important diseases connected with heat exposure, for instance, dehydration, drowsiness, exhaustion and cramps resulting from heat.
- 5- The dangers of any toxic substances, or other physical stress to which workers are exposed.
- 6- The importance of heat acclimatization and of recording this data for each worker in a special file that is easily accessible to workers.

Monitoring:

- 1- Placing wet belt thermometers (ordinary mercury thermometers where the mercury reservoir is covered with soaked cotton gauze) in hot work areas.
- 2- Using black thermometers 'GLOBE thermometers' (a mercury thermometer when the mercury reservoir is covered by a black metal envelope) in addition to wet thermometers.
- 3- Waiting for half an hour before taking readings from each thermometer.
- 4- Determining the wet black temperature measurement from this equation:

Wet black temperature = 0.7 x reading from wet thermometer measurement + 0.3 x reading from GLOBE Thermometer.

The following table may also be used, provided it shall be applied separately for every single hour of work, and that aforementioned conditions are fulfilled.

**SAFE STANDARDS FOR HEAT STRESS FOR
EACH WORKING HOUR**

SYSTEM OF WORK AND REST EVERY HOUR	LIGHT WORK	MEDIUM WORK	HARD WORK
Continuous work	30°C	27°C	25°C
75% work, 25% rest	30.5°C	28°C	26°C
50% work, 50% rest	31.5°	29.5°C	28°C
25% work, 75% rest	32°C	31°C	30°C

Work under conditions of low temperature:

In case it is necessary to work under conditions of low temperature suitable vocational safety procedures shall be taken, such as wearing respiration equipment that allows warming of the inhaled air, and using protective insulating clothing that maintains the workers' inner body temperature.

ANNEX 10

NON-DEGRADABLE POLLUTING SUBSTANCES PROHIBITED FROM DISCHARGE INTO THE MARINE ENVIRONMENT BY INDUSTRIAL ESTABLISHMENTS

Non-degradable substances are those found in the environment for a long time. This time depends, basically, on the quantities discharged into the marine environment since some substances disintegrate after long periods, ranging from a number of months to several years, which depends on the composition of these substances and their relevant concentration in the environment.

Non-Organic Substances such as:

- Mercury and its compounds
- Lead and its compounds
- Cadmium and its compounds
- Cobalt and its compounds
- Vanadium and its compounds
- Nickel and its compounds
- Selenium and its compounds
- Zinc and its compounds

Organic Substances such as:

- Organophosphorus Pesticides
- Dimethoate
- Malathion

Substances at very low Concentrations that Disintegrate within some Months:

- Organochlorine Pesticides
- Aldrin
- Dieldrin
- DDT
- Chlordane
- Endrin

Non-Degradable Substances, Remains of which stay around for several Years:

- Polychlorinated Biphenyls (PCBs)
- Aroclor 1254
- 2,3,5,6-Tetra chlorobiphenyl

These substances are completely non-degradable and are considered highly toxic at very low concentrations:

- Polynuclear Aromatic Hydrocarbons (PAHs)
- Benzol-a-pyrene
- Naphthalene

Degradable, with very small quantities decomposed over years - solid substances such as:

- Plastics
- Fishing Nets
- Ropes
- Containers