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REPORT ON MISSION TO

THE ENVIRONMENTAL PUBLIC AUTHORITY THE STATE OF KUWAIT

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STRENGTHENING THE ENFORCEMENT OF ENVIRONMENTAL LEGISLATIONS IN THE STATE OF KUWAIT

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Note: The views expressed in this report are those of the author and do not necessarily reflect those of the United Nations Economic and Social Commission for Western Asia.

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EXECUTIVE SUMMARY

The State of Kuwait has passed legislation for the protection of its environment with modest degrees of success in compliance. The main challenging problem contributing to such limited accomplishment is the lack of a legal, comprehensive, cohesive and effective system for enforcement of environmental legislation. In other words, deficiencies of environmental protection in Kuwait is not merely the results of poorly designed environmental laws or lack of qualified human resources but, to a large extent due to the lack of environmental executive acts, codes of conduct, and most important the enforcement systems.

The immediate objective of the current mission is to provide the Environmental Public Authority (EPA) with a series of guidelines that are needed to establish a system capable of enforcing the issued environmental law and the set of environmental acts currently under preparation.

The adequacy of enforcement power in the currently implemented environmental legislation's in Kuwait was partly assessed. The measures to be undertaken by EPA to promote compliance were identified in light of the environmental legislation's and environmental acts currently under preparation. A series of escalating EPA responses to violations using a hierarchical system was suggested. The capacities and infrastructure needed for the implementation of regular monitoring systems, field inspections, external and self-monitoring, self-inspection, self-auditing and self-reporting programs were identified. A preliminary assessment of the adequacy of EPA environmental laboratories (either accredited/certified or not) in furnishing quality assured evidences to the proper court of law was provided. A methodology for the assessment of appropriate penalties to be imposed by Kuwaiti courts of law on violators of the proposed environmental acts has also been proposed.

It has also been noticed that the proposed Kuwait Environmental Acts (KEAs) are being designed to tackle single medium problem such as water quality, air quality, or solid waste. This fragmentation of the environmental issues into separate compartment or acts might fail to account for the pollutants move from one compartment to another.

Kuwaiti Government must develop a capacity to enable the enforcement of its proposed KEAs currently under preparation, with a fair, systematic and effective regulation system. If Kuwait Government fails to ensure that the policies and laws it enacts are equally complied with, it will jeopardize its own credibility as well as the validity of the law.

Compliance means the state of conformity with environmental laws and their executive acts. In order to secure environmental compliance, the EPA as the sole competent environmental agency in the State of Kuwait, is advised to immediately take the following three actions simultaneously:

a) Issue the required environmental laws, legislation's, executive environmental acts and codes of conduct.
b) Promote compliance through communication of environmental legislation and acts; publication of

relevant information; consultation with parties affected by the legislation; provide technical assistance to affected parties; etc. and finally

c) Enforce the legislation's through the following:
   - Development of the inspection capacities and accredited monitoring systems to verify compliance,
   - Preparation of procedures for investigations of violations,
   - Identification of the measures taken to compel compliance without resorting to formal court action, such as directions by inspectors, ticketing, and
   - Development of measures to compel compliance through court action, such as injunctions, prosecution, court orders upon conviction, and civil suit for recovery of costs.

I- INTRODUCTION

The State of Kuwait has passed legislation for the protection of its environment with modest degrees of success in compliance. The main challenging problem contributing to such limited accomplishment is the lack of a legal, comprehensive, cohesive and effective system for enforcement of environmental legislation. In other words, deficiencies of environmental protection in Kuwait is not merely the results of poorly designed environmental laws or lack of qualified human resources but, to a large extent, the lack of environmental executive acts, codes of conduct, and most important the enforcement systems.

Unfortunately, in many cases it was noted that some national authorities in Kuwait were found to be the most significant violator of their own environmental laws and regulations. In some other cases, the issued environmental legislation's were criticized by some sectors as being unenforceable because they are either technically inappropriate or economically unaffordable. However, in most of the cases, the main stumbling block facing implementation of environmental legislation was the lack of enforcement capacities among the local (municipalities) and national competent environmental authorities (EPA). Apart from the Marine Oil Pollution law # 12 for 1964 and its subsequent amendments, Kuwait has generally ineffective enforcement regulatory measures, such as ill-defined fines and penalties particularly for the industrial sector that is mostly publicly owned.

The immediate objective of the current mission is to provide the EPA with the main guidelines needed to establish a system capable of enforcing the issued environmental law and the series of environmental acts currently in preparation. At the request of the head of EPA the mission report would also include the following aspects:

1. Assessment of the adequacy of enforcement power in the currently implemented environmental legislation's in Kuwait
2. Identification of the measures to be undertaken by EPA to promote compliance of issued environmental legislation's and environmental acts currently under preparation,
3. Suggestion of a series of escalating EPA responses to violations using a hierarchical system,
4. Identification of the capacities and infrastructure needed for the implementation of regular monitoring systems, field inspections, external and self-monitoring, self-inspection, self-auditing and self-reporting programs.
5. Assessment of the adequacy of EPA environmental laboratories (either accredited/certified or not) in furnishing quality assured evidences to the proper court of law.
6. Development of a methodology for the assessment of appropriate penalties to be imposed by Kuwaiti courts of law on violators of the proposed environmental acts.

Enforcement is generally defined as the application of a set of legal tools designed to ensure that a defined set of requirements is complied with. Ideally, an enforcement policy would have the following features:

1. It is one that maintains the likelihood of violation detection
2. It is the one that provides serious consequences of violation detection
3. It is the one that ensures swift and sure response to detection
4. It is the one that results in a fair and consistent response to violation detection.

Consequently, Kuwaiti Government must develop a capacity to enable the enforcement of its proposed KEAs currently under preparation, with a fair, systematic and effective regulating system. If Kuwait Government fails to ensure that the policies and laws it enacts are equally complied with, it will jeopardize its own credibility as well as the validity of the law. Its sincere efforts in making environmental policy will be wasted and environmental laws and acts will become "paper tigers" or just words on paper with no actual improvement in environmental protection.

It has been common to notice that when developing a policy framework for environmental protection, governments in the Gulf Region in general have frequently failed to devote sufficient attention to providing practical institutional means of ensuring that their recently developed policies and standards are complied with. There is often a lag between developing and implementing effective licensing systems that stipulate precise and enforceable pollution standards, and monitoring or inspecting the permitted industry facilities to ensure that the standards are being adhered to. Similarly, Kuwait desperately needs the establishment of effective enforcement systems to deal with violators of environmental regulations.

It is obvious to recognize that before too much effort is made in perfecting environmental policies and laws that cannot be enforced, Kuwait government need to establish mechanisms and systems (which can later be improved) to ensure that their environmental standards are being met.

In beginning to establish a system to implement, monitor and enforce the EPA proposed policies and legislative framework, a multi-media integrated approach should be the central starting point. An integrated approach enables EPA to take into account all the emissions and other ecological impacts of a facility when considering a permit application and verifying compliance to it. With an integrated approach, EPA can ensure that pollution control measures or prescriptions do not simply shift pollutants from one media to another. An integrated approach that takes into account the source of pollutants can also minimize the inter-agency duplication of effort and administrative paperwork within the environmental agency.

EPA should recognize that enforcement is the ultimate action to seek compliance with the KEAs and other regulations that are currently under preparation and review by all concerned sectors in the Government.

Once the KEAs are approved, verified and passed by the Kuwaiti legislators, their enforcement will require serious capacity building by EPA. The following areas are considered fundamental for the development of enforcement capacity:

- Compliance inspection capacity
- Compliance monitoring capacity
- Sampling and analysis capacity
- Gathering of evidence capacity
- Administrative actions capacity
- Civil actions capacity and/or
- Criminal action capacity

Compliance with the proposed KEAs and regulations is the foremost goal of EPA as a regulating agency. Meanwhile, obtaining compliance and deterring the regulated parties from future violations are the main purposes behind penalties and related enforcement actions.

Deterrence may foster compliance and will ultimately prevent an individual from committing a violation or allowing it to reoccur, as well as deter others in the regulated community from committing violations.

For each proposed environmental act and regulation program EPA should develop a systematic program to achieve high compliance levels. Each program might be different taking advantage of the unique opportunities presented by the administrative nature of Kuwait without distorting the provisions of the law.

II- ENFORCEMENT PROBLEMS ASSOCIATED WITH THE FRAGMENTATION OF PROPOSED ENVIRONMENTAL ACTS IN KUWAIT

The EPA is currently endeavoring on developing a number of executive environmental acts using the participatory approach. The number of committees involved in these tasks is 18. Different sectors of the government are involved in the process to secure maximum participation and transparency. However, in order to avoid problems associated with fragmentation of these acts, it is important for EPA to invest in the additional efforts needed to sensitize and integrate these acts.

A very successful air emissions reduction program, for instance, can merely transfer the pollutants to another media. Successful measure to treat discharges could simply result in the creation of masses of sludge that are subsequently landfilled, causing soil contamination and underground water pollution, not to mention health and safety hazards.

An integrated approach on the other hand, encourages at-source, cleaner production measures, reducing the amount of waste to be disposed of, minimizing energy and raw material consumption, and preventing pollutants from appearing in any medium.

- To enforce single medium acts, EPA should naturally respond by developing system of single medium monitoring, inspection and enforcement. Inevitably, this causes a situation where those enforcing air pollution laws are at odds with those enforcing water pollution laws. Compliance with air pollution standards, for instance, might lead to reduced air emissions but increase effluents for water authorities to deal with.
- A non-integrated approach also tends to encourage traditional, end-of-pipe controls (e.g. filters, scrubbers, cooling towers, electrostatic precipitators) which not only tend to transfer pollutants from one medium to another, but which, despite considerable investment costs, bring no economic payback.
- A single medium approach also means that different agencies or departments are inspecting the same plant, requiring facilities to fill out forms and provide much of the same information. This can cause confusion for a company not to mention added paperwork, duplication of effort and disregard for

public authorities' administrative complexity, and inconsistency.

- Other problems which can be caused by fragmented acts and implementation structures to control pollution include:

  - An inaccurate assessment of pollution problems and the development of solutions that might not work.
  - Failure to identify new and complex problems
  - The difficulty of setting priorities among problems.
  - Impeded cooperation between environmental policy and other policy sectors.

To avoid these problems, the development of an integrated approach by EPA is called for during the preparation of KEAs. The single medium focus needs to be shifted to a multiple media focus on all releases of pollution from their source, namely industrial facilities. Such an integrated approach allows pollutants to be followed from one medium to another. One integrated permit can then be issued to each regulated facility, and integrated inspections can be conducted by a single agency or department at EPA or at least allow for real and effective coordination between media - specific agencies.

Even if the laws themselves are still developed for a single medium, as is the case in Kuwait, the inspection should take into consideration the total environmental impact of a facility and ensure that the overall damage to the environment is minimal. This should also be reflected in the structure and organization of the inspectorate as suggested in a subsequent chapter of this report. Corrective measures within the single permitting system should ensure minimum integrated environmental damages at least.

In this respect, it is important to note that political struggles between departments within the same regulating institution can often act as a barrier in shifting from a single medium to an integrated multi-medium approach. Practical measures need to gradually be formulated and applied to overcome such interdepartmental rivalry.

III- AUTHORITIES TO BE RESPONSIBLE FOR ENFORCEMENT OF ENVIRONMENTAL LEGISLATION'S IN KUWAIT

The following authorities were found to be the most appropriate entities responsible for the implementation of the proposed KEAs and other existing legislation's:

- EPA is responsible for the preparation and administration of the KEAs. The EPA Director acts in accordance with the legislation and is accountable to Kuwait National Assembly (KNA) for his actions.
- The Ministry of Communication (MOC) is responsible for the enforcement of the Prevention of Marine Pollution by Oil Act # 12 for 1964 and its following amendments and its minister is also accountable to KNA.
- Attorney General: While enforcement officials may lay charges for offences, the ultimate decision on whether to proceed with prosecution of the charges rests with the Kuwaiti Attorney General. The EPA inspectors should typically recommend civil actions to the officials of the Kuwaiti Attorney

General. The office of the Kuwaiti Attorney General will then have the ultimate decision on proceeding with the injunction or suit for cost recovery.

- Court of Environment: The EPA is proposing the formulation of a court of environment. It is suggested that the role of this court includes the constitution of the final decisions regarding prosecution, injunction application and civil suits under the proposed KEAs, including what penalty to impose or what remedy to order.
- Enforcement Officials: - EPA inspectors and investigation specialists -
  - → EPA Inspectors: Power given to EPA inspectors should include 1- unannounced entry, 2- search, 3- seizure and detention of items related to the enforcement of KEA, 4- power to require the production of documents and electronically stored data, and 5- power to issue tickets as detailed in the statute.
  - → EPA Investigation specialists: Investigation specialists should have expertise in areas such as 1- investigative techniques, 2- gathering of evidence and procedures to ensure continuity in the control and custody of evidence, 3- taking statements and soliciting information from witnesses; 4- procedures involving the securing and execution of search warrants; 5- court procedures; 6- preparation of briefs for government prosecutors; and 7- appearing as a witness in court proceedings.

IV- NECESSITY OF COMPLIANCE WITH ENVIRONMENTAL REGULATIONS IN KUWAIT

Compliance with environmental regulations is defined as the achievement and maintenance of environmental requirements by particular facilities in the various target groups (industry, agriculture, etc.).

Compliance and enforcement of environmental legislation's in Kuwait are important for the following four reasons:

1. Compliance with regulations is essential "bottom line" through which the environmental goals are targeted and effectiveness of Kuwait government sustainable development policy can be achieved.
2. Compliance with regulations is undoubtedly more cost effective for both industry and government than clean-ups later. This is particularly true when integrated approach, that encourages at-source prevention and/or reduction, is used.
3. EPA will lose its credibility if the KEAs that will be soon enacted are not immediately, effectively and fairly implemented. Similarly, other government efforts to protect the environment will not be taken seriously if compliance with regulations is not verified and enforced.
4. The environmental efforts of "leadership" companies (KOC, KNPC, etc.), and some companies in the Shuaiba Industrial Area (SIA) that go above and beyond government standards need to be encouraged by ensuring that all companies equally abide by the same basic environmental standards.

IV-1- WHAT ARE THE MAIN SOURCES OF COMPLIANCE INFORMATION?

There are four main sources of compliance information that EPA can develop, promote, institutionalize, and rely upon. These sources can be categorized according to their descending order of preference as follows:

1. Self monitoring and reporting by the potential sources of pollution and on the expense of the generators. For instance, the oil sector, the industrial sector, the agricultural sector, the public work sector, etc., should self-monitor and report on the environmental aspects associated with their own activities to EPA. The self monitoring-reporting program should be designed and imposed by EPA to include parameters to monitor, sampling locations, frequency of sampling, standard methods of analysis, minimum acceptable analytical quality control, frequency and timing of reporting, reporting format etc.
2. Inspection by government officials such as EPA inspectors or independent contracted accredited third parties.
3. Ambient monitoring by EPA or other relevant government agencies.
4. Citizen complaints.

The mix of information sources used varies from one environment to another, but usually self-monitoring and reporting should be by far the most important and preferred means of monitoring compliance in Kuwait.

IV-2- HOW CAN EPA DEVELOP A NATIONAL COMPLIANCE STRATEGY FOR KUWAIT?

The environmental regulating agency, namely EPA should start by designing a national compliance strategy. This strategy should be based on the following two basic elements:

- Element one involves **the establishment of a compliance monitoring program**, which sets out the priorities and rationale for conducting on-site inspections and other types of compliance monitoring.
- Element two involves **the establishment of an enforcement response policy**, which details the appropriate level of enforcement action associated with the many ways that a regulation can be violated. This enforcement policy should also details the principles and rationale for determining the seriousness of various types of violations as factor in assessing penalty amounts. This element will be discussed in much further details in the next chapters of the report. As it stands, the environmental legisaltions in Kuwait has no significant enforcement power except in the case of Oil Pollution law # 12 for 1964. The KEAs, currently under preparation, should include sanctions articles to their violators.

IV-3- MEASURES AVAILABLE FOR EPA TO INSURE THE COMPLIANCE OF THE REGULATED PARTIES?

A fundamental principle of the EPA environmental policy should be directed towards the surveillance of the environmental activities of the regulated parties. The regulated parties should keep track of their compliance status and report all the resulting data to the responsible department at EPA. This is particularly true in the case of Shuaiba Industrial Area (SIA) that is self-monitored by the Shuaiba

Environmental Protection Center (EPC).

Self-monitoring and reporting requirement identifies potential violations and provides the EPA inspectors with a complete history of the compliance behavior of a facility within SIA. All facilities permitted to operate should be required to file Discharge Monitoring Reports (DMR) on a monthly or quarterly basis for all the constituents designated for monitoring as a condition of the discharge permit. Meanwhile, in addition to self-monitoring and reporting (DMR) systems, EPA has the authority and liberty to resort to one or more of the following measures to insure the compliance of various regulated parties.

- While required self-monitoring and submission of DMR are key features of the EPA compliance program that we suggest, regulated sources also should be subject to periodic on-site inspections by EPA inspectors or its delegated responsible authorities. Part of the on-site inspection should include a review of DMR, record-keeping, compliance status, and reasons for noncompliance. Owners, managers or operators of facilities that submit incomplete, inaccurate, or false information should be subject to civil or some times criminal sanctions.
- Area monitoring can be another method for EPA to use for compliance monitoring, although should be less used than self-monitoring and reporting. It consists of using ambient monitoring or remote sensing to monitor environmental conditions in the vicinity of a facility or over a large area. Area monitoring can be used to
  - assess impacts of activities,
  - to assess trends,
  - to provide data useful in assessing risks and health impacts and
  - to provide a screening device for identifying potential violations particularly from oil tankers, at loading-unloading terminals, in the vicinity of industrial free zones and near areas where compliance problems may be found.

V- THE ROLE OF EPA IN PROMOTING COMPLIANCE WITH PROPOSED KEAS

Further to the significant efforts currently undertaken by EPA in developing KEAs using the participatory approach in Kuwait, an additional work should be made towards the promotion of the KEAs to be issued. Based on experiences from other parts of the world, it is believed that compliance through information, education and other means is an effective tool in securing conformity with the law.

V-1- HOW CAN EPA PROMOTE COMPLIANCE?

As a part of a comprehensive initiative, the EPA should promote compliance with the Kuwaiti environmental legislation's and proposed acts through a combination of the following measures:

First: Education and Information

Under its environmental awareness program, EPA should give notice of the availability of and

distribute upon request the following materials:

- Copies of the KEAs and its regulations upon their completion
- Environmental quality guidelines and objectives, release guidelines, and environmental codes of practice, developed under the acts
- Enforcement and compliance policy for the acts
- Bulletins on enforcement and compliance procedures
- List of court actions arising from future enforcement of the KEAs such as:
    - Injunctions, indicating the name of the individual, company or government agency, who is subject of the injunction, the action required under the injunction, and the time schedule to complete the action
    - Convictions under the act, indicating the identity of the offender, the nature of the offence, and the sentence imposed by the Kuwaiti court
    - Court orders following conviction for an offence under the proposed KEAs, indicating the identity of the offender and summery of the contents of the order,
    - Civil suits instituted by Kuwait government, such as those to recover reasonable costs of cleanup or those incurred to remedy damage to the environment, and
    - Forfeitures of items seized under the act
- A list of orders issued by EPA Director under the KEAs, indicating the action required and the time schedule to complete the action
- Information on precedent setting cases under the KEAs
- Fact sheets, handbooks, pamphlets and reports on subjects relevant to the acts.

Second: Promotion of Clean Technology Development and Evaluation:

EPA should continue and strengthen its cooperation with the National Research Institutions (KISR), academia (KU and Applied Technology Institutes), oil industries (KOC, KPC, etc.), International Organizations such as UN (UNIDO, UNEP, ESCWA, UNESCO, ILO, IAEA, etc.). This cooperation should lead to the promotion and development of new, clean and environmentally sound technology in Kuwait as well as the evaluation of existing technology in use in the world, to facilitate its adaptation and application to Kuwaiti conditions.

Third: Technology Transfer:

EPA should provide the other Government agencies, the oil companies, the private sector, the municipalities the technical information on the following:

- Best means for pollution abatement
- Control measures to prevent releases of substances into the environment
- Approved methods for analysis and monitoring

Fourth: Consultation on Regulation Development and Review:

The current participatory approach used by EPA in developing the various environmental acts is extremely valuable. EPA should also note that consultation on regulation development and amendment with the parties to be regulated would result in better and more effective regulation for protection of the environment in Kuwait. Furthermore, compliance with regulations is more likely when there has been

involvement by those parties in their development or amendment.

Fifth: Environmental Codes of Practice and Guidelines:

While codes of practice and guidelines are not regulations and do not have the force of law, they can help achieve the objectives of the KEAs currently under development. In addition to KEAs, EPA is required to create environmental codes of practice, environmental quality guidelines and release guidelines. EPA should develop these codes of practice in consultation with interested parties, including the oil sector, industry and environmental groups. It is important to note that ESCWA "pending the approval of its Executive Secretary" is in a position to assist EPA in developing the needed environmental codes of practice and guidelines in due course.

Codes of practice as well as the environmental quality and emission or release guidelines can assist the putting in place of management practices that will result in better protection for the environment in Kuwait. Codes focus on substances and the processes and techniques related to their production and use, including activities such as handling, packaging, distribution, transport, and disposal. It is recommended that EPA should always base its codes of practice on the best available and practicable technology.

Codes should also contain technological information on alternatives to achieve protection of the environment. They may detail procedures, practices or release limits relating to works and undertakings during any phase of development or operation, including siting, design, construction, startup, closure, and dismantling.

Six: Promotion of Environmental Audits:

Environmental audits are internal evaluations by companies and government agencies, to verify their compliance with legal requirements as well as their own internal policies and standards. They are conducted by companies, government agencies and others on voluntary basis, and are carried out by either outside consultants or employees of the company or facility from outside the work unit being audited. Audits can identify compliance problems, weaknesses in management systems, or areas of risk. The findings are usually documented in a written report.

It appears that environmental auditing of industrial establishment is conducted on an ad-hoc voluntary basis. EPA should recognize and make use of the power and effectiveness of environmental audits as management tools for companies and government agencies, and should promote their use by industry and others.

In order to encourage the practice of environmental auditing, inspections and investigations under the proposed national EPAs should be conducted in a manner, which should not inhibit the practice or quality of auditing. EPA inspectors should not request environmental audit reports during routine inspections to verify compliance with the proposed KEAs.

Access to environmental audit reports may be required only when EPA inspectors or investigation specialists have reasonable grounds to believe that:

- An offence has been committed
- The audit's findings will be relevant to the particular violation, necessary to its investigation and

required evidence

- The information being thought through the audit cannot be obtained from any other sources through the exercise of the inspector's or investigation specialist's powers.

EPA should inform companies and government agencies that environmental audit reports should not be used by any mean to shelter monitoring, compliance or other information that would be accessible to EPA inspectors.

VI- INSPECTION AND INVESTIGATION CAPACITIES OF EPA

Even though EPA is efficiently administering a very impressive aggregate of environmental laboratories, yet its inspection and investigation capacities are quite limited. Additional resources have to be allocated towards establishing and strengthening the capacities needed to enforce the proposed KEAs. At the present time, most of the environmental violations are dealt with on a friendly basis and soft contacts are already established between EPA officials and major industrial establishments to amicably resolve apparent environmental violations. EPA is currently resorting (actually compelled) to such an approach due to the present lack of legalized environmental acts. Furthermore, EPA should start immediately (concurrent with the development of KEAs) the establishment of an inspectorate accompanied by a clear program of inspections and investigations that is complemented by spot checks. The schedule of inspections in this program should be determined by the risk that the substance or activity presents to the environment or to human health, and by the compliance record of the individual, company or government agency. Inspection schedules to be also set by EPA officials should be established to verify adherence to warnings, orders by EPA, injunctions, and court orders upon conviction of the offender.

VI-1- INSPECTION:

Inspection is defined as the process by which inspectors determine that a facility is in or out of compliance, including examination of records, quality of discharges, and other conditions.

The purpose of an inspection is to verify compliance with the KEAs and their regulations. To conduct an inspection of a premise, the EPA inspector must have reasonable grounds to believe that, on the premise that he intends to enter and inspect, there are activities, materials, substances, records, books, electronic data or other documents that are subject to the KEAs or relevant to their administration.

VI-1-1- Levels of Inspection:

There are several inspection levels that EPA should consider when designing its systematic compliance program. These are:

1. Walk-through Inspection: It consists of a tour of the facility by a skilled and experienced inspector. It would include:
   - Noting the existence of pollution-control equipment,
   - Observing work practices and housekeeping, and

- Checking the record repository.

2. Compliance Evaluation Inspection: In addition to what has been mentioned in walk-through inspection, it would include
   - A review and evaluation of the records,
   - Interviews with facility personnel,
   - Determining the details about pollution control systems and devices in place and
   - Possible collection of a grab sample of the effluent for quick analytical check.

3. Sampling Inspection: It includes in addition to the activities listed in the above two inspections a preplanned sample collection to be conducted in duplicate sampling and analysis performed by the owner or operator. Split samples will confirm or refute the reported compliance data. Sampling inspection can also be used to document the extent of contaminated area or environmental damages.

In addition, inspections and inspectors serve other useful purposes as follows:

- They promote voluntary compliance through consultation and the provision of information and technology transfer.
- They serve as a visible manifestation of the regulatory process by establishing a regulatory presence.
- They gather during inspections data and evidences that may support the permit issuance or standards setting processes.

VI-1-2- Authority to be Given to EPA Inspectors:

In the course of inspection, the EPA inspector may examine substances or products, wastewater effluents, discarded solid waste, air emissions; open and examine receptacles, containers, or packages and take samples. The EPA inspector may also examine books, records or electronic data and make copies of them. If during an inspection, the EPA inspector discovers a violation, his or her response should be determined by the nature of the offence (including the degree of harm or potential harm to the environment) and by the compliance history of the company, individual or government agency. In case of violation, the EPA inspector can take one of the following escalating actions in the list:

- If the degree of harm or potential harm appears to be minimal, the EPA inspector may issue a warning.
- If the offence meets the conditions for ticketing set down by EPA in ticketing regulations, the inspector may issue a ticket.
- If the offence is the unauthorized release of a substance and the company, individual or government establishment having charge of the substance is not taking all reasonable measures to prevent the release or to prevent the release or to prevent or correct resulting damage to the environment or human health, the EPA inspector may issue a direction to take the appropriate measures.
- If the company, individual or government agency fails to take the appropriate measures or action, the inspector may take the measures himself by drawing from EPA resources and/or hire qualified experts to take the necessary action.
- If the EPA inspector decides that an investigation or other enforcement response such as an EPA order, injunction or prosecution is required, the inspector will complete the inspection and then

leave to consult an EPA investigation specialist, except in exigent circumstances.

- In such a circumstances, when the delay necessary to obtain a warrant would likely result in danger to the environment or human life or in the loss or destruction of evidence, the EPA inspector will begin an investigation immediately and, where necessary, exercise the power to search without warrant, and to seize and detain items.

In all other circumstances, where premises must be entered to carry out an investigation, this should be done under the authority of a search warrant. The only occasion when an EPA inspector should not seek a search warrant is in exigent circumstances (that is, when the delay necessary to obtain a warrant would likely result in danger to the environment or human life or result in the loss or destruction of evidence).

VI-2- INVESTIGATION:

An investigation involves gathering, from a variety of sources, evidence and information relevant to a suspected violation. Investigations will normally be carried out by trained EPA investigation specialists, although EPA inspectors may also be obliged to conduct investigations, when the specialists are not available to do so. A search is a component of an investigation, and the search power may be used by inspectors and investigation specialists when fulfilling their duties.

There are two instances in which inspectors or investigation specialists should conduct investigation:

1. When she or he has reasonable grounds to believe that an offence has been committed.
2. When public complaints and resident of some Kuwaiti community petition the EPA to investigate an alleged violation of the environmental legislation.

During the course of a search with or without a warrant, EPA inspectors and investigation specialists may seize and detain anything which they reasonably believe was used to commit an offence under the Environmental Act, is related to the commission of an offence or will provide evidence of an offence. Inspectors and investigation specialists will use their power and seizure and detention, when they believe that the seizure is necessary and in the public interest.

VI-3- BUILDING THE INSPECTION AND INVESTIGATION CAPACITIES AT EPA:

In order for EPA to build its enforcement capacity, it should start by establishing an inspection and investigation unit. The inspection unit should be affiliated with the permitting department with strong links with industrial monitoring and pollution control divisions. The following is a programmatic (step-by-step) methodology for building the inspection capacity at EPA:

Step I: EPA Should Find the Resources Needed to Set-up an Environmental Inspectorate

The resources required for to set-up an environmental inspectorate at EPA would always be reflecting the size and complexity of the various economic sectors in the country. There are, of course certain fundamental resources needed in order to have at least the beginnings of a functional and effective inspectorate which can carry-out integral inspections. However, steps can be taken with minimal personnel and resources if priorities are well defined and real political will exists. Fundamental

infrastructure needs are as follows:

- Trained staff to conduct integrated inspections of industrial plants
- Infrastructure with administrative and criminal prosecuting authorities (police, public prosecutor, municipalities, central government).
- Logistics and support equipment - e.g. vehicles or alternative transportation facilities, field sampling equipment, instruments and gears for rapid field assessments.
- Certified and accredited laboratories for comprehensive environmental analysis
- A functional administrative system to document, follow-up and keep records of inspections

In most cases, the analysis of physical samples of effluents, emissions and wastes will require more resource-intensive facilities. However, direct sampling might be necessary when specific environmental problems have been identified or for periodic or continuous checks of the environmental quality of water, air and soil. This will require:

- Specialized skilled personnel to conduct direct sampling and analytical measurements
- Certified or accredited environmental laboratories to physically analyze samples of air, water, waste, and/or soil
- Rapid impact and risk assessment teams
- Availability of operational emergency teams and tested contingency programs.

Where resources are not available for an inspectorate to hire specialized personnel such as in the current situation at EPA other alternatives should be found. For example, reputable private sector might be contracted to do the inspection and external environmental auditing work. However, an accreditation, certification and/or inspection systems should also be established to control the quality performance of these contractors according to the approved USEPA or ISO-14000 auditing protocols.

Step II: EPA Should Identify the Functions of the Developed Environmental Inspectorate.

The functions of an environmental inspectorate are identified based on the local situation related to availability of laws, standards, guidelines and policies for environmental auditing, licensing and enforcement. The functions of an inspectorate at the EPA can be gradually upgraded and properly defined in phases as follows:

1. Present State in Kuwait: Where nearly no environmental acts or codes of practice exists (grassroots situation - except in the case of marine oil pollution): The suggested function of the inspectorate should be centered on advising, planing, assisting and not policing.
2. Near Future State in Kuwait: When the KEAs are formulated and the codes of practice are developed and more enforceable prescriptions are developed, then, the function of the inspectorate should be less as an EPA adviser that assists only on request and will start as an EPA inspector. As a result the inspector should advise on inspection and enforcement. He should show that he can be tougher unless changes are made in a proper time (it might be advisable that the inspector should be a different person than the one in step 1). He should act not as policeman, but he should be very strict in his approach, very consistent in action, and predictable.
3. In the Future: When all licensing procedures are functioning; laws, environmental acts and codes of practice are approved and passed; standards and regulations are known, registration is fully developed, then, the EPA inspectorate should require reports, results, actions more or less voluntary but if not, the EPA inspector starts acting like a policeman. Strong warnings, tickets should be

given, and public prosecutor can be involved.

4. Ultimately: When enforcement mechanisms are in place, the EPA inspector should conduct compliance testing either within the inspectorate or via independent accredited third party, checks for emission (EPA can resort to private sector or local research institute), and checks on accountants book to investigate costs of disposal, treatment technologies, cost of operation of environmental laboratories etc.

All these actions and especially step 3 and step 4 require very highly skilled inspectors with extensive background in environmental engineering or science.

Step III: Identify the Overall Tasks of the Proposed EPA Inspectorate

The tasks of an inspectorate usually evolve in a number of steps according to their particular situations, starting from a situation where there are no environmental acts (as is partially the case in Kuwait) and an ill-informed industry to one in which industry is well informed of its obligations in complying with well established laws.

The tasks of an environmental inspectorate will thus vary according to the stage of development in the KEAs. But essentially, these tasks can be summarized as follows:

1. Provide response and advice to permit applicants, communicate with the licensing authorities during the planning stage of the new facility, or during the preparation of a rehabilitation scheme.
2. Assist the licensing authorities to define the content of the permit.
3. Advise and assist the operator of the facility to comply with the regulations on the occasions of the inspection.
4. Define and impose remedial actions if necessary. Apply or recommend sanctions if needed (fine, fees levied against the company corresponding to the amount of money the company made while avoiding compliance).
5. Follow up results of monitoring on the occasion of the inspections. Consolidate the results of the monitoring activities.
6. Prepare and maintain records on inspections made, observations, actions taken, results of sample analyses and other relevant information. Sound record keeping is not only essential for effective inspectorate responsibility, but also as material for future enforcement activity (e.g. court case) if systematic violations of a permit occur.
7. Prepare and disseminate information to industry on the regulations and on the currently available environmentally sound technologies.
8. It is also important for the inspectorate to play a role in keeping the public informed about the environmental situation, pollutants emitted, eventual hazards, existence of emergency response plants, etc. If kept well informed, the Kuwaiti public and NGOs can provide an influential and sometimes silent pressure on business to ensure that environmental regulations are respected by industry.
9. Finally, it is the implicit task of inspectorates to encourage voluntary compliance of companies by promoting sound environmental management practices.

Step IV: Financial Appropriations for the Environmental Inspectorate.

Who should Pay for the Inspection Costs?

In existing inspectorates, the financial resources required are usually raised through taxes or fees based on the polluter pay principle (e.g. emission fees, fossil fuel taxes). However, due to the current circumstances prevailing in Kuwait, it is advisable that the central government through EPA starts by providing the needed resources for the establishment of the inspectorate. There is no reason why over time, a significant proportion of the costs of the environmental inspectorates in Kuwait should be gradually recovered from industry through one of the following mechanisms:

1- Permit Charges: In France and the UK, for example, the fees paid by each permitted plant cover the costs of inspectorates. In the Netherlands, central government resources provide the financial requirements of the inspectorate.

- In Belgium, the permit charge costs 470 ECU
- In France, the permit charge costs 1300 ECU
- In Germany, the permit charge commensurate with the size of the investment
- In Netherlands, permit charge up to 22,000 ECU
- In UK, variable scales for the initial fee and annual fees.

2- Financial Penalties: Financial penalties for persistent non-compliance, in addition to their deterrent role, can also contribute to the operation costs of an inspectorate. Some examples of maximum non-compliance penalties from European countries are given below:

- In Belgium, fines up to 71,000 ECU and imprisonment
- In Denmark, Netherlands and UK, unlimited fines and imprisonment
- In France, fines up to 145,000 ECU and up to 2 years imprisonment
- In Germany, fines up to 50,000 ECU and imprisonment

VII- HOW CAN EPA RESPOND TO VIOLATIONS?

Enforcement officials at EPA should be able to examine every suspected violation of which they have knowledge. If after the examination the inspectors determine that there is insufficient evidence to prove the violation or that the violation did not, in fact, occur, they will take no further enforcement action.

VII-1- CRITERIA FOR RESPONSES TO VIOLATIONS:

Whenever a violation of the KEAs is discovered, EPA enforcement officials should apply the following factors when deciding on the kind of enforcement action they must take:

1. Nature of the violation: This includes consideration of the seriousness of the harm or potential harm, the intent of the alleged violator, whether this is a repeated occurrence and whether there are attempts to conceal information or otherwise subvert the objectives and requirements of the act.
2. Effectiveness in achieving the desired result with the violator: The desired result is compliance with the act, within the shortest possible time and with no further occurrence of violation. Factors to be

considered include the violator's history of compliance with the act, willingness to cooperate with enforcement officials, and evidence of corrective action already taken.

3. Consistency in enforcement: Enforcement officials have to insure consistency in their responses to violations. Accordingly, EPA officials should consider how similar previous situations were handled in Kuwait, in the region and from around the world when deciding what enforcement action to take.

VII-2- LEVELS OF ENFORCEMENT ACTIONS AVAILABLE FOR EPA TO RESPOND TO ENVIRONMENTAL VIOLATIONS:

Inspection or monitoring activities may uncover permit or law violations. In such an event, EPA may take one of the four legal actions pursuant to the appropriate statute as follows:

VII-2-1- Administrative Actions:

Administrative actions may either be informal or formal.

Informal Administrative Action: Informal administrative actions are basically notices of noncompliance or warning letters issued from EPA. They are usually advisory in nature. In these actions, the manager of a facility is advised that a violation have been found, the corrective action needed, and the time within which an action to correct the problem must be instituted. Generally, informal actions carry neither penalty nor power to compel action. However, the records of an informal action can be used to support more severe legal actions when situation is not satisfactorily corrected.

Formal Administrative Action: Formal administrative actions are legal actions that result in an order requiring the violating party to correct the violations and, in most cases, they pay a civil penalty that commensurate with the seriousness and circumstances of the violation. These administrative actions are strong enforcement tools. If a person violates the terms of an administrative order, a Kuwait court action may be obtained based on an EPA recommendation, to force compliance with the order. Generally, administrative actions are the most expedient means of requiring correction, and they are used in lieu of civil or criminal actions whenever appropriate.

How Can EPA Implement Administrative Actions: Administrative actions can be taken under EPA's internal administrative litigation system, which can be comparable to any court system, except that it is presided over by EPA's administrative law judges, whose salaries in this case should be paid by EPA. The EPA legal adviser can play this role during the current transition phase.

All administrative actions have the potential to be challenged in the Kuwait court system. Therefore, conduct of the administrative actions should be governed by an extensive set of procedural rules designed to provide mature process to the alleged violator and to ensure the integrity of the system.

Violators may appeal the initial rulings of the administrative judge to EPA administrator and may appeal the administrator's final decision to the Kuwait courts.

VII-2-2- Civil Judicial Actions:

Civil actions are taken in the Kuwait court system by the Kuwait Ministry of Justice (KMJ) at the request of EPA. Typically they are used against more serious or recalcitrant violators of environmental laws. Generally, they are intended to seek prompt correction of imminent hazard situations posing immediate threat to human health or the environment. Preparation of civil judicial cases is resource intensive because of the Ministry of Justice involvement and the more formalized procedures required for court action as compared to administrative actions.

Civil cases often result in penalties and court orders requiring correction of the violation and also requiring specific actions, such as specialized monitoring to prevent future noncompliance.

VII-2-3- Criminal Judicial Actions:

Criminal actions are taken when a person (such as tanker captain) or company (such as oil refinery) has knowingly and willfully committed a violation of the law. In a criminal case, The Ministry of Justice prosecutes an alleged violator in Kuwait court system, seeking criminal sanctions, usually including fines and incarceration. Criminal actions should be taken only when flagrant, intentional disregard for environmental laws and/or deliberate falsification or alteration of possibly incriminating documents or environmental records. The Ministry of Justice usually brings criminal cases at the exclusive request of EPA. Criminal cases are the most difficult to pursue. They require special investigation and case development procedures and they involve the highest standard of proof, including proof of intent of the violator to commit the violation.

Criminal cases, which can include incarceration as one of the penalties, should be the least used of the potential legal actions in Kuwait. However, its mere existence is fundamental for the following two main reasons:

- The proposed environmental acts currently under development by EPA might call for criminal cases to be filed, giving it more deterring power, and
- Based on experience from USA and Western Europe, It is believed that the most effective deterrent is to find "the person who turned the valve" and perhaps his superiors guilty of criminal conduct and send them to jail. This will definitely impresses corporations operating in Kuwait much more than the low to moderate corporate fines in civil cases.

VII-3- SUGGESTED MEASURES FOR RESPONDING TO ENVIRONMENTAL VIOLATIONS:

Potential adverse consequences of non-compliance should not be restricted to the conventional responses provided beneath. Response to environmental violations can also include permit provocation's, fines, and adversarial relations with regulatory agencies (EPA), as well as criminal prosecution of corporate officials. Conventionally, the response to environmental violations includes in an increasing order one of the following regulating measures:

1- Warnings:

EPA inspectors may use warnings in the following cases:

- When they believe that a violation of the act is continuing or has occurred; and
- When the degree of harm or potential harm to the environment, human life or health appears to be minimal

When deciding on whether to use warnings or more severe enforcement action, EPA inspectors may also consider the following:

- Whether the individual, company or government establishment has good history of compliance.
- Whether the individual, company or government establishment has made reasonable efforts to remedy or mitigate the consequences of the offence or further offences.

Warning should be given in writing including the following information:

- The section of the act that was violated
- A description of the alleged offence
- The time limit within which the person, company or government establishment must comply with the warning
- The statement that if the warning is not heeded, enforcement officials will take further action.

2- Directions by Inspectors:

Where there is a release of a pollutant in contravention of regulations under the KEAs, an EPA inspector may give directions to the person, company or government establishment that owns the released pollutant to take all reasonable emergency measures to:

- Remedy any dangerous situations; or
- To reduce any danger to the environment or human life or health that results from such a release.

As the proposed KEAs should impose on individuals, companies and government establishments the obligation to take such measures, the EPA inspector will not ordinarily issue such directions unless the obligations are not met. The directions should be given in writing.

Failure to comply with the directions by an EPA inspector should head to prosecution of the individual, company or government establishment for this failure. In case of inability to comply with the directions, the EPA inspector should be empowered under the proposed KEAs to take the action himself or to hire qualified experts to take the emergency measures.

3- Ticketing:

The purpose of ticketing is to delineate exact offences, associated fines, and procedures to respond to tickets. The proposed KEAs should designate offences where there is minimal or no threat to the environment or human health, as ticketable offences.

The inspector should not issue a ticket unless he determines that a warning is the appropriate response and the offence is a repeated occurrence. If the offence is ticketable and a repeated occurrence and the first response were a warning, the EPA inspector should issue a ticket.

Once the EPA inspector issue the ticket, the accused party may within a certain time limit stated on the ticket responds in three different ways:

1. He may plea guilty and pays the fine to the appropriate court as indicated on the ticket without making a formal court appearance.
2. He may plea guilty with an explanation and appears in court to request lower penalty or additional time to pay the fine.
3. He may submit a plea of not guilty, resulting in formal court proceedings.

If the accused fails to choose an option and does not respond within the time limit, a conviction is then entered against him and EPA should begin proceedings to collect the penalty.

4- Injunctions:

Under KEAs, the EPA Director has the authority to seek an injunction "court order", in order to stop or prevent a violation of an environmental legislation.

EPA inspectors are supposed to carry out inspections to ensure that the individual, company or government establishment does not comply with the terms of the injunction.

If the individual, company or government establishment does not comply with the injunction, the EPA Director should return to the court to seek:

- A contempt "disregard" of court ruling
- Instruction by the court for the violator to comply within the stated time limit in the injunction
- Any additional penalty, such as fine or imprisonment that the court may see fit to impose in its contempt of court ruling.

5- Prosecution:

EPA inspectors should lay a charge for every violation of the proposed KEAs unless they determine that

- A warning is the most appropriate enforcement action
- Issuing a ticket is the most appropriate response

Prosecution should always be pursued in the following cases:

- There is a death of or bodily harm to a person
- There is a serious harm or risk to the environment, human life or health
- The alleged violator knowingly provided false or misleading information, or made a false or misleading test of substance in pretended compliance with the KEA.
- The alleged violator obstructed the inspector in carrying out of his or her duties and responsibilities under the KEA.
- The alleged violator interfered with a substance seized by an inspector under the KEA.

- The alleged violator concealed or attempted to conceal information after the offence occurred.
- The alleged violator did not take all reasonable measures to comply with a direction by an EPA inspector

6- Penalties and Court Orders upon Conviction:

Upon the conviction of an offender for a certain violation it is expected that EPA inspectors would recommend to the prosecutor the proper penalty to be imposed. The recommended penalty should commensurate with the nature and gravity of the offence. Penalties to be included in the KEAs should include fines or imprisonment or both and court orders that accompany a fine or imprisonment.

When making such a recommendation with respect to sentencing, the EPA inspector should apply the following criteria:

1. The nature of the violation
2. Effectiveness of the recommended penalty in achieving the desired result with the violator (namely compliance with the KEA and no further occurrence of the violation).
3. Effectiveness of the recommended penalty in deterring others from committing violations and in ensuring compliance with the statute (general deterrence).

Upon conviction of the violator, EPA enforcement officials may request in their recommended sentence, that the court include one or more of the following orders:

- Prohibit the offender from doing any activity that may result in continuation or repetition of the offence.
- Direct the offender to correct resulting harm to the environment or to take measures to avoid potential harm.
- Direct the offender to notify, at the violator's own expenses, any person, company, or government agency adversely affected by the offender's infraction of certain KEA.
- Direct the offender to publish the facts relating to the conviction
- Direct the offender to compensate EPA for the costs of the preventive or corrective measures (including cleanup) taken by EPA as a result of the violation.
- Direct the offender to pay an amount for the purposes of conducting research into the ecological use and disposal of the substance in respect of which the violation was committed.

IIX- CREDIBLE EVIDENCE FOR THE INDICTEMENT OF ENVIRONMENTAL VIOLATORS

Following the passage of the KEAs, EPA will face the need to enforce the adopted regulations and operational standards. Enforcement of these acts will evidently necessitate the submission of unchallenged indictment evidences of violations and noncompliance to the court of law. Most of the evidences of indictment will be based on laboratory analysis of environmental samples from different matrices. These analyses will be conducted to either establish or disprove that the quality of the emissions or ambient environmental qualities exceed the limits set in the adopted standards in KEAs. Credible evidence is the only means by which any alleged fact that is being investigated may be established or

disproved. Documentation of evidence must be accurate, authenticated by signature or initials and complete. A universal rule is that hear-say is inadmissible (hear-say evidence that is based not on a witness' personal first hand knowledge or direct involvement, but on matters told to him by another).

Evidence includes everything individual does that is relevant to an issue at hand. It may include:

- Inspection reports
- Personal observations during inspection
- Video recording of the offences
- Dated photographs with clear landmarks.
- Examination of self-monitoring reports
- Field notes appropriately dated and signed or initiated
- Specific conservation with identified individuals
- The collection of samples at a particular time in a particular day, and similar information.

It is important to note that ESCWA "pending the approval of Its Executive Secretary is in a position to assist EPA in the development of a system that can furnish credible evidence for the purpose of legal enforcement of environmental legislations.

IIX-1- CREDIBLITY OF ENVIRONMENTAL EVIDENCES?

The following are the means and criteria by which EPA can insure the credibility of its evidence against violators and noncompliance perpetuators.

IIX-1-1- Sampling and Analysis:

Traditionally, prosecutors and judges are very fond of analysis and measurements. These are considered as "hard facts or evidences", while oral descriptions of say the biological condition of the marine environment are not accorded the same significance. In the regular situation, an accredited laboratory will carryout the analyses or measurements. The court is usually not forced to unconditionally accept such measurements. The court habitually attaches great importance to analyses being carried out as prescribed in the authorization conditions.

Sampling and analyses to be used for evidence may involve the air, land, water, aquatic sediments, or sludge's, bacteria, plants, or animals, waste effluents or waste sludge, toxic substances containers, water supply systems etc. All sampling and analysis should be subject to a precise quality assurance/quality control programs for field and laboratory activities. Standard analysis and operating procedures such as EPA, OSHA, NIASH, ASTM, ISO 9000 or equivalent should be recorded and strictly followed. Where it is necessary to deviate from the above plans or standard procedures, the deviation should be recorded and the reason for such a deviation noted. The controlling word is proper documentation. All aspects related to sampling and analyses procedures should be recorded, dated, and signed or initiated by the person who will be in a position to testify regarding personal participation in the action and personal knowledge of the facts presented on the signed note page.

In addition to the long-term ambient environmental quality monitoring, the primary focus of EPA laboratories should include test results for scientific investigations related to compliance and enforcement. Obviously, EPA laboratories should have staff who can provide indisputable Certificates of Analysis

(COA) and expert testimony for prosecution.

IIX-1-2- Implementation of a Flawless Chain-of-Custody:

Proper chain of custody procedures allow the possession and handling of environmental samples (evidences) to be traced and identified at any moment from the time that sample containers are initially prepared for sampling to the final disposition of the sample. A qualified and officially nominated Quality Assurance/Quality Control (QA/QC) officer should manage the chain of custody in EPA laboratories. The chain-of-custody should include the following:

1. A written record of the laboratory's source and manner of preparation of sample containers should be referenced. This should include the laboratory quality control procedures for assuring that a container is clean, ready to accept a sample, properly labeled and of proper size and material. Sample label should be water proofed, marked with indelible ink, and secured to the body of the sample container. They should contain the sample number, preservation technique if applicable, date and time of sample collection, and initials of the collector.
2. A documented procedure for management of sample containers, both in the field and in the laboratory, to prevent either inadvertent contamination or potential opportunities for tampering.
3. The field supervisor should maintain a bound, page marked field logbook in a manner such that field activity can be completely reconstructed without reliance on the memory of the field crew. Items to be noted in the logbook should include the following:
    - Date and time of activity
    - Names of field supervisor and team members
    - Purpose of the sampling exercise
    - Description of the sampling site
    - Location of the sampling site
    - Sampling equipment used and their calibration records
    - Any deviation from standard operating procedures and the justifying reason.
    - Field observations
    - Field measurements made
    - Results of any field measurements
    - Sample identification
    - Type and number of samples collected
    - Sample handling, packaging, labeling, and shipping information
4. The field logbook should be kept in a secure place until a unit effort or activity for which particular logbook is maintained has been completed, whereupon the logbook should be kept in a secure case file.
5. The official QA/QC officer should make sure that chain-of-custody record accompanies each group of samples from the time of collection to their destination at the receiving laboratory. Each person who has custody of the samples at any time must sign the chain-of-custody form and ensure that the samples are not left unattended unless secured properly.
6. Gummed paper custody seals or custody tape should be used to ensure that the seal must be broken when the container is opened.
7. Within the laboratory, security and confidentiality of all stored material should be maintained at all times. This may require that any analyst sign for any sample removed from the refrigerated storage area for purposes of performing analysis and note the time and date of returning a sample to

storage.

8. Before releasing or reporting any analytical results, all information on sample labels, data sheets, tracking logs, and chain-of-custody records should be crossed checked to ensure that data pertaining to a sample are consistent throughout the record.

IIX-1-3- Documentation's:

Records should detail all information about sample and/or test organisms, including the following:

1. Collection: Date; time; locations; pre- post-, or dechlorinated; weather conditions; wind direction; hydrographic circulation patterns; methods of collection; and collector.
2. Transportation: Method, chain-of-custody, packing to ensure correct temperature maintenance and security.
3. Laboratory: Storage, analysis, calibrations, quality assurance, quality control, chain-of-custody, and security.
4. Testing: elapsed time from sample collection, treatment, standard method identification number and type of test
5. Test organisms: species, source, age, health, and feeding
6. Test results: including quality control results such as field and laboratory blanks, duplicates, replicates, spikes and controls.
7. All calculations that impact test results and interpretation such as instrument calibrations, detection limits, method's sensitivity and standards preparation.
8. Any observations of a non-routine occurrence that may be important in interpretation of results.
9. Equipment and instrument maintenance, malfunction and calibration.
10. Any deviation from the protocol.

IIX-1-4- Expert and Witness Testimony:

Expert testimony is evidence presented by a person where both sides and the court agree that the person is an expert on the subject at issue because of education, qualification, training, or knowledge of the subject matter. An expert may testify on the alleged facts presented in the case or on personal judgment or conclusions based upon similar situations elsewhere with which the witness is familiar in a professional way.

As with all evidences, a witness must describe why, where, who, and what the results were, because the witness saw these occurrences or was personally involved in the act. As stated earlier, a witness cannot testify on something the witness has heard someone else say because this is based on the veracity and competence of someone other than the witness himself.

IX- HOW CAN EPA POSSESSES ENFORCEMENT AUTHORITY THROUGH KEAs?

The only means for EPA to acquire enforcement authority is through a series of environmental acts specifying the standards, criteria, regulations, guidelines and deterrence to be observed by the management of operating facilities. The same acts will define the role and authority of EPA in regulating and enforcing these acts.

KEAs should bestow some special powers to EPA that are of significance for its supervisory activities. KEAs should specify that EPA inspectors have universal right of access to exercise their powers and that a court order should not be required to force entry. It is up to EPA whether the inspection should be undertaken announced or unannounced. Another important point to be specified in KEAs is that EPA has the right to demand information on pollution caused by the enterprise. EPA can always demand the information that the enterprise already has on hand and concerning pollution. KEAs should also request the industry, at its own expenses, to undertake analyses of its routine pollutant discharges.

With respect to enforcement, the KEAs should prescribe the various powers granted to government officials to enforce the act. KEAs should authorize inspectors to conduct inspections for matters regulated under the act and to search and seize evidence where there are reasonable grounds to suspect that a violation of KEAs has occurred. KEAs should also authorize inspectors to issue directions for the taking of remedial measures.

KEAs should also authorize EPA Director to make orders prohibiting the manufacturing or importation of a substance during a toxicity assessment. KEAs should list all environmental offences, authorize the court to order convicted offenders to pay compensation for loss of or damage to property. The proposed environmental acts should also authorize the courts to issue injunctions and a wide range of penalties. These penalties can range from the forfeiture of ships or seized items to fines of up to several thousand Kuwaiti Dinars and three to five year terms in jail. It can also require guilty parties to take remedial action on their own expenses. Life imprisonment should be listed in KEAs as a serious possibility, under the criminal code, for offences involving criminal negligence causing death of a person. In addition, KEAs should permit the court to impose an additional fine equal to the estimated amount of monetary benefit acquired by the convicted offenders as a result of committing the offence.

The following are only examples of the enforcement authorities that can be given to EPA through various environmental acts. For instance

In the Clean Air Act:

- A section should be included to provide the basic enforcement mechanisms for stationary source violations.
- Administrative orders should be specified and made available only for requiring new or existing sources to comply within 30 days from receipt of an order.
- Civil actions should be provided against any owner or operator of a major stationary source, for a permanent or temporary court order, or to assess and recover a civil penalty of certain sum of money for each day of violation, or both for the violation of a number of different standards or

other actions.

- Where knowing violation of Clean Air Act occurs, criminal prosecution should be provided with significant fines charged per day of violation, or imprisonment for up to one year, or both.
- Sections should be provided to give civil enforcement authority for violations of the motor vehicle emission control program.

In Clean Water Act:

- The clean water act should authorize EPA to be the first line of enforcers and should retain over-riding authority to take enforcement action on the National level.
- A section should be provided to specify administrative compliance orders, administrative penalties, civil penalties of sum of money per day of each violation of the Clean Water Act or permit limitation. It should also include criminal penalties for negligent violations, knowing violations or personal endangerment.
- A section to provide Kuwaiti citizen civil suits against any person who is alleged to be in violation of an effluent standard of limitation under the Clean Water Act or an administrative order.
- A section should be provided to guide on the gravity of the violation in determining the amount of a penalty for the discharge of oil or hazardous substances. Associated with the gravity of the violation is the standard of care evidence by the owner or operator, the size of the business, the effect on the ability to continue in business, and the nature and extent, and degree of success of any efforts to minimize or mitigate the effects of discharge.
- A section should be provided for EPA to issue administrative orders requiring owners and operators of facilities to undertake monitoring, testing, analysis, and reporting regarding their facility whenever EPA determines that releases resulting from their operation may present a substantial hazard to human health or the environment.

In the Toxic Substances Control Act:

- This act should provide unannounced inspection authority for EPA, subpoena authority, civil penalties, and particular enforcement and seizure authority.
- Under this act EPA will have the authority to ban, prohibit or restrict the manufacture, processing, distribution in commerce, or use of chemicals or chemical substances.

In the Insecticide, Fungicide, and Rodenticide Act:

- This act should authorize EPA to issue an administrative order to stop the sale, use, or removal of any pesticide that is reasonably believed to be in violation of the act.
- It should authorize EPA the seizure of any pesticide that has been adultered or misbranded.
- Civil administrative penalties and criminal sanctions should also be provided in the act.

In the Safe Drinking Water Act:

- This act should provide EPA with inspection and information gathering authority.
- A EPA inspector may inspect each public water supplier or other persons subject to national primary drinking water regulation, applicable underground injection control program, or any requirement under the act to monitor an unregulated contaminant.
- The act should include civil and criminal penalties for tampering or attempting to tamper with public water systems with the intention of harming persons.

In the Comprehensive Environmental Response and Liability Act:

This act should provide for administrative court orders to force responsible party to clean up a site, fulfill settlement agreements, and cost recovery actions where the government performs the clean up and then seeks court-imposed liability on responsible parties for response costs.

IX-1- INCORPORATION OF PENALTIES IN EPA ORDINANCE?

Penalties should be associated with the EPA ordinance, including standards and Maximum Permissible Levels (MPL) specified in the various KEAs currently under development.

Cash penalties should be only one element of EPA overall enforcement effort. EPA should use other sanctions, in addition to the penalties such as:

1. Revoking permits
2. Imposing additional compliance conditions and
3. Publicizing enforcement actions to create deterrence.

It is strongly recommended that EPA take specific enforcement actions in the very early stages following the issuance of the proposed environmental acts (KEAs) against violators at specific sites where inspections have revealed violations. These firm and intractable actions will very likely be capable of fostering compliance at all facilities throughout Kuwait. Based on every experience from around the world, enforcement casts a wide shadow of deterrence, which dissuades people from violating the environmental laws.

A credible enforcement presence by EPA gives industrial facility managers in Kuwait a substantial incentive to comply. Many industrial managers should indoctrinate that it is good business strategy to comply with environmental regulations, it is worthy to acquire immaculate reputation and meritorious to take the credit for good community citizenship. The alternative is noncompliance and the unfavorable publicity associated with violations and penalties for them.

X- ASSESSMENT OF ENVIRONMENTAL PENALTIES

Enforcement of environmental laws and regulations via penalty assessment in Kuwait will undoubtedly realize the following three major goals:

- The first goal is the realization of successful deterrence because it provides the best protection for the environment and it reduces resources necessary for program administration. If penalty is to achieve deterrence, both a potential violator and the general public must be convinced that a penalty places a violator in a worst position than those who have complied in a timely fashion.
- The second goal of enforcement via appropriate penalty assessment is the fair and equitable treatment of regulated community in Kuwait.
- The third goal of enforcement by penalty assessment is provision of a swift solution for a lingering environmental problem.

The environmental protection acts "currently under preparation by EPA" should authorize and enable in their articles, the administrator of the EPA to bring civil judicial and administrative actions against

those who violate certain enumerated requirements of these environmental acts. In these judicial and administrative actions the administrator of EPA may seek civil penalties.

EPA should bring enforcement actions to require alleged violators to promptly correct the violations and remedy any harm caused by the violations. As part of the enforcement action, EPA should also seek substantial monetary penalties, which can realize the following:

- Promotion of environmental compliance
- Protection of public health by deterring future violations by the same violators.
- Deterring violations by other members of the regulated community.
- Ensuring that violators do not obtain an unfair economic advantage over competitors who have done whatever was necessary to comply on time.
- Encouraging companies to adopt pollution prevention and recycling techniques, so that they minimize their pollutant discharges and reduce their potential liabilities.

This chapter is designed to assist EPA in defining the appropriate penalties in settlement of civil and administrative actions. This chapter will provide EPA with the guidelines needed to estimate the lowest penalty figure, which the agency should accept in a settlement. The guideline is designed so that violators whose actions, or inaction's, result in a significant economic benefit and/or harm or threaten public health or the environment would pay the highest penalties.

The proposed penalty assessment guidelines will be designed to serve the following four important purposes.

1. Penalties should be large enough to deter noncompliance.
2. Penalties should help insure that violators do not obtain an economic advantage over their competitors.
3. Penalties should be consistent and predictable across all geographical locations. This is desirable as it not only prevents the creation of "pollution heavens" but also provides fair and equitable treatment to the regulated community wherever they may operate.
4. Penalties should be based on a logical calculation methodology to promote swift resolution of enforcement actions and the underlying violations.

X-1- CRITERIA FOR ASSESSING SANCTIONS FOR DETERRENCE:

The EPA should develop an internal policy on items to consider in determining the civil penalty that will provide deterrence. In most cases the items for consideration should be designed to ensure that penalties eliminate any significant economic benefit resulting from noncompliance. In many instances, the economic advantage to be derived from noncompliance is the ability to delay making the expenditures necessary to achieve compliance.

Example of noncompliance may include one or more of the following:

- Discharge of waste-water or emission of air pollutants exceeding the Maximum Allowable Concentration (MAC)
- Failure to install equipment needed to meet discharge or emission control standards.

- Failure to affect process changes needed to eliminate pollutants from products or waste effluents.
- Failure to self test where testing is mandatory to demonstrate achieved compliance
- Improper storage or disposal of hazardous substances where such is required to achieve compliance.

Examples of violations which enable a violator to avoid certain compliance costs:

- Cost savings from operation and maintenance of required equipment that was not installed.
- Failure to properly operate and maintain existing environmental control equipment
- Process, operational, or maintenance savings from removing pollution control equipment

A penalty should include an amount reflecting the seriousness or gravity of the violation. Factors that EPA should take into consideration in this case include:

- Actual or possible damage caused by the violation
- Importance to the regulatory scheme
- Relative impact of a penalty on the violator
- Amount of pollutant released to the environment
- Degree of toxicity of the discharged pollutant
- Sensitivity and vulnerability of the environment
- The duration of time a violation continued
- The degree of willfulness or negligence
- The degree of cooperation or non-cooperation in reporting of noncompliance and prompt correction of environmental problems.
- History of noncompliance
- Ability of the violator to pay the fine.

XI- METHODOLOGY FOR PENELTY CALCULATION

1. The statutory maximum penalty should be included in the environmental acts currently under preparation by EPA. For instance, the maximum statutory penalty for the violation of the daily maximum limit for pollutant "A" is KD 5,000.00; the maximum statutory penalty for failure to properly monitor for pollutant "B" is KD 1,000.00; etc.

2. Before proceeding to calculate the settlement penalty, EPA staff should estimate the statutory maximum penalty in order to determine the potential maximum penalty liability of the emission or discharge. The penalty that EPA seeks in settlement may not exceed the specified statutory maximum amount. In general the maximum penalty for violations of an effluent limit for a period longer than one day includes a separate penalty for each day in the time period (assuming there was a discharge on each day).

3. The monetary penalty is calculated based on the following formula.

PENALTY = ECONOMIC BENEFIT + GRAVITY +/- GRAVITY ADJUSTMENT FACTORS – ABILITY TO PAY.

XI-1- ECONOMIC BENEFIT:

Every effort should be made to calculate and recover the economic benefit of non-compliance. The main purpose of incorporating economic benefit in calculating the due penalty is to place violators in the same financial position as they would have been if they had complied on time. Companies that violate certain environmental act are likely to have obtained an economic benefit as a result of delayed or completely avoided pollution control expenditures during the period of noncompliance. Some of the commonly delayed and avoided pollution control expenditures include:

- Monitoring and reporting (including costs of the sampling, proper laboratory analysis and reporting);
- Capital equipment improvements or repairs, including engineering design, purchase, installation, and replacement;
- Operation and maintenance expenses (e.g. labor, power, chemicals) and other annual expenses; and
- One-time acquisitions (such as land purchase).

XI-2- GRAVITY COMPONENT

It is important for EPA to make every reasonable effort to calculate and recover a gravity component in addition to the economic benefit component. The removal of the economic benefit of noncompliance only places the violator in the same position as he would have been if compliance had been achieved on time. Both deterrence and fundamental fairness require that the penalty include an additional amount to ensure that violator is economically worse off than if he had obeyed the law.

It is important to note that calculation of gravity should be based upon a logical scheme and criteria that quantifies the gravity of violation grounded on the environmental acts currently under preparation by EPA.

The gravity component of a penalty is usually calculated for a certain period **"T"** (day, week or month) in which there was a violation. The total gravity component for the penalty calculation equals the sum of each gravity component in time **T**. the **T** gravity formula is as follows:

T Gravity Component = (1 + A + B + C + D) x KD 100*

* KD 100 is a suggested penalty that can be readjusted by EPA

Factor A: Significance of Violation (Rate of 0 to 20).

This factor is based on the degree of exceedance of the most significant effluent limit violation in each time duration **T**. Values ranging from 0 to 20 are selected from within designated ranges; violations of toxic effluent limits are weighted most heavily (for a duration **T**). The following guideline is proposed for the A factor as follows:

Table 1: Gravity Factor **A** The Violation

Percent by which effluent limit was exceeded	Factor **A** Value Ranges	
Maximum %	Toxic Pollutants**	Conventional Pollutants*
1-50	1-3	0-2
51-100	1-4	1-3
101-200	3-7	2-5
201-600	5-15	3-6
601- >	10-20	5-15
Percent Exceedance of Fecal Coliform Limit	Standard Units oboe or below pH limit	Factor **A** Value Ranges
0-100	0-0.5	0-5
101-500	0.51-2.0	2-8
501-5000	2.01-3.0	4-10
5000->	3.01-4.0	6-12
	4.01->	8-15

* Conventional pollutants are pollutants that are not identified as toxic such as BOD, TOC, Total Dissolved Solids etc. in water and CO, CO2, Total Suspended Particulates in case of air.

** Toxic pollutants are mercury, PCBs, dioxin, etc.

If there were no effluent limit violations in a particular time duration **T**, but there were other violations, then factor **A** is assigned a value of zero in that duration's gravity calculation.

Factor **A** values for fecal coliform and pH, which are calculated using logarithmic scales, are calculated using the special scales at the bottom of the table.

Factor B: Health and Environmental Harm (range 0 to 50)

A value of this factor is selected for each duration **T** in which one or more violations present an actual or potential harm to human health or to the environment. Values can be selected from the suggested values of **B** in the following table:

Table 2: Gravity factor **B** - Health and Environmental Harm

Type of Actual or Potential Harm	Factor **B** Value Ranges
Impact on human health (e.g. damage to water supplies, degradation of air quality, etc.)	10-50
Impact on water, air or soil environment	
Whole effluent toxicity limits were exceeded	1-10
Fish kill, beach closing, restriction of water body, soil contamination, land deprivation, etc.	4-50
Other impacts on aquatic, atmospheric or earth environment.	2-25

Factor C: Number of Effluent Limit Violations (Range from 0 to 5)

This factor is based on the total number of effluent limit violations within time duration **T**. In order to properly quantify the gravity of the violations; all effluent limit violations are considered and evaluated. Violations of different parameters at the same outfall are counted separately. A minimum factor **C** value of one is generally appropriate whenever there are violations of two or more different pollutants. Values for this factor may be selected by comparing the number of effluent limits exceeded with the number of effluent limits in the permit. For instance if all the limits in the permit were violated in the time duration **T**, a value of 5 would be appropriate; if 50% of the limits in the permit were violated, a factor of 2 to 3 would be appropriate.

Factor D: Significance of Non-Effluent Limit Violations (From 0 to 70)

This factor is based on the severity and number of non-effluent limitations requirements violated each time duration **T**. The types of non-effluent violations can be 1- violations of monitoring requirements, 2- violations of reporting requirement, 3- pretreatment program implementation, 4- unauthorized discharges, etc. The value of **D** for a given duration **T** is the sum of the highest value for each type of non-effluent limit violation.

As an example for calculating factor D for certain duration, assume the following:

- The discharger did not sample for 5 of the 10 parameters in its permit,
- The discharger submitted his monitoring report 20 days late
- The discharger discharged a process effluent through an unauthorized outfall without treatment for several days.

From Table 3, the value of factor **D** will be calculated as follows:

- A value of 4 will be selected for failure to conduct half of the parameters from the first type.
- The delay in submitting the report should not be considered since the other type 1 violation produced a higher value.
- For the unauthorized discharge a value of 6 may be selected for type 4.

Thus the total value for factor D for the specified time duration is 4 + 6 = 10.

XI-3- GRAVITY ADJUSTMENT FACTORS:

In certain circumstances, the total gravity amount may be adjusted by two additional factors, namely the history of recalcitration (to increase gravity) and quick settlement reduction factor (to reduce gravity). The resulting figure [Benefit + (gravity +/- gravity adjustments)] is the preliminary penalty amount.

History of Recalcitration:

The recalcitrance adjustment factor is used to augment the penalty based on a violator's bad faith, or unjustified delay in preventing, mitigating, or remedying the violation. This factor is applied by multiplying the total gravity component by a percentage between 0 to 150 percent. A minimum recalcitrance factor of 10 percent is generally appropriate for each instance in which a violator fails to substantially comply in a timely manner with an administrative compliance order, information request, or a sate enforcement order. Thus if a violator violated 3 administrative orders, a minimum recalcitrance factor of 30 percent is generally appropriate.

Table 3: Gravity factor **D** - Non-effluent limit violations

The factor value for a given time duration **T** is the sum of the highest value for each type of non-effluent limit violation	
Type and extent of violations	Factor **D** value range
Type 1- Effluent monitoring & reporting violations	
Failure to conduct or submit adequate pollutant sampling data or 1 or more pollutant parameters (but not all parameters)	1 to 6
Failure to conduct or submit any required pollutant sampling data in a given time duration T but with reasonable belief that the facility was in compliance with applicable limits	2 to 6
Failure to conduct or submit any required pollutant sampling data in a given time duration T but without reasonable belief that the facility was in compliance with applicable limits	6 to 10
Failure to conduct or submit whole effluent toxicity sampling data	4 to 10
Delay in submitting sampling data	0 to 6
Failure to submit a periodic compliance report or to sample again after finding violations	2 to 8
Any other monitoring or reporting violation	0 to 10
Type 2- Pretreatment program implementation violations	
All key program activities implemented, with some minor violations	0 to 4
Many key program activities not implemented	4 to 8
Few if any program activities implemented	6 to 10
Type 3- Unauthorized discharge: e.g. discharge through an unpermited outfall, discharge of a pollutant not identified in the permit, etc.	1 to 20
Type 4- Any other type of noneffluent limit violation	1 to 12

Quick Settlement Adjustment Factor:

In order to provide an extra incentive for violators to negotiate quickly and reasonably, and in recognition of a violator's cooperativeness, EPA may reduce the gravity amount by 10 percent if EPA expects the violator's cooperativeness.

XI-4- ABILITY TO PAY:

EPA should not request settlement penalties that are clearly beyond the financial capability of the violator. This means that EPA should not seek a penalty that would seriously jeopardize the violator's ability to continue operations and achieve compliance, unless the violator's behavior has been exceptionally liable, recalcitrant, threatening to human health or the environment, or the violator refuses to comply.

The adjustment for ability to pay may be used to reduce the settlement penalty to the highest amount that the violator can reasonably pay and still comply with the issued acts. The violator has the primary responsibility of establishing the claim of inability to pay.

If the violator demonstrates an inability to pay the entire penalty in one lump sum in 30 days, a payment schedule should be considered. The period allowed for such installment payments should not generally extend beyond three years.

If a payment schedule will not resolve the violator's ability to pay issue, as a last resource, EPA can reduce the amount it seeks to a more appropriate amount.

XII- OFFICIALS MET:

Kuwait Public Environmental Authority:

Dr. Mohamed Al-Sarawi	EPA Chairman of the Board
Mrs. Wafaa Ahmed Khamis	Director of DEPIA
Dr. Aly Heleil	Senior Adviser - Air Quality
Dr. Bahgat Habashi	Senior Adviser - Marine pollution
Dr. Samir Massoud	Senior Adviser - Soil Pollution
Mrs. Ibtissam Aly Al-Abaid	Director of Earth and Arid Land Dept.
Mrs. Fatma Malalla	Director of Env. Laboratories

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Dr. Saleh Al-Muzaini	Environment Dept. Director
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