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## **LAUNCHING ENFORCEMENT PROGRAMS THROUGH COMPLIANCE ACTION PLANS**

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### **SUMMARY**

In 1997, a tool was added to the environmental management scene of Egyptian industry, namely the Compliance Action Plan. The tool has been developed to address the special needs of the end of the 3-year grace period of Law 4 of 1994, Egypt's most recent environmental law. The grace period has been granted to allow existing establishments at the time of its issuance to comply with its requirements. However, it has become clear that the overwhelming majority of the regulated community will still be non-compliant by the end of this grace period (February 1998).

The idea behind the Compliance Action Plan has been to shift the social focus from the line dividing the complying and the non-complying groups of the regulated community to shedding the light on a more dynamic and meaningful, given the state of compliance, feature which is the seriousness of the establishment in moving towards compliance.

The Compliance Action Plan thus addressed the threat of an unproductive deadlock between the regulators and the regulated. However, it is also a typical case of a threat turned into an opportunity to establish a more cooperative interaction pattern between the two parties.

The Egyptian Environmental Affairs Agency has developed a system to introduce and manage the new tool. Unfortunately, major stumbling blocks have prevented the implementation of the system as designed. Nevertheless, the introduction of this tool had major repercussions on the different aspects of environmental management of industry in Egypt, some of which will still be unfolding for the next few years.

## **1 THE CONTEXT**

### **1.1 Law 4 of 1994**

After a long debate of the most recent Egyptian environmental law in three consecutive parliamentary sessions, it was finally issued in January 1994 and became known as Law 4 of 1994. Several environmental laws preceded this one whose original concept was to unify them and complement them under one umbrella law. However, the approach was watered down during the long debate to complementarity only rather than integration.

The law has introduced a number of new features in environmental management in the Egyptian context. Environmental Impact Assessment, hazardous waste management and regulations, economic incentives and regulated community self-monitoring just to count a few. It is the first Egyptian law to regulate air emissions and ambient conditions, which were regulated by other lower level regulations such as ministerial decrees. It is also the first law to address marine pollution in an integrated manner from both sea-based and land-based sources. It addresses a wide range of other issues from protection of species to

vehicle emissions and contingency planning for environmental disasters. It is, however, only a part of a wider arsenal of environmental laws, managed by a wide group of regulators, to which establishments are subjected.

Law 4 of 1994, re-established the Egyptian Environmental Affairs Agency, created by Presidential Decree in 1982, as the national authority responsible for environmental policy and planning. However, the law did not give the Egyptian Environmental Affairs Agency full executive authority for the implementation of its requirements, but established it as a core agency to manage the environmental agenda in coordination with other “concerned administrative agencies”. These concerned agencies, depending on the case, may be any of the ministries, authorities, or the different levels of local administration.

## 1.2 The State of Environmental Compliance

Earlier environmental laws have not had a bright record of compliance. For example, compliance with one of the major laws, Law 48 of 1982 concerning the protection of the Nile and water channels from pollution, was still not the rule 12 years later when Law 4 of 1994 was issued. However, movement had already started towards compliance with the requirements of this law and others. Its pace has also increased after 1994, although mainly limited to larger establishments.

Given these conditions, and because, obviously, laws do not create social order (environmental laws are no exception), Law 4 of 1994 has granted the establishments existing at the time it was issued a three year grace period starting from the date its executive regulation are issued (February 1995) to comply with its requirements. This grace period was not only a chance for establishments to comply, but also and more importantly, a chance for the regulators to introduce the elements of a social order conducive to the enforcement of the law after this period has elapsed. In fact, it is impractical to enforce a law that does not reflect and is not supported by a social trend. A critical mass of law abiders is a precondition for efficient enforcement.

The question became how could such a critical mass be created.

### 1.2.1 The Focus on Industry of the Egyptian Environmental Affairs Agency

The poor compliance situation applies to all sectors. Hotels and resorts in the tourism sector, hospitals and clinics in the health sector, municipal services such as solid waste disposal sites and wastewater treatment plants among others were far from the requirements of the law. All these sectors, and others, have been the subject of the Egyptian Environmental Affairs Agency initiatives, even before the issuance of Law 4/94, to increase their level of compliance in preparation for an eventual enforcement of the law.

The industry sector has seen a higher level of activity. No records are kept to indicate whether a conscious institutional decision was taken to focus on this sector. In all likelihood, it could have been the result of the efforts of a small active group coupled with a larger scope of opportunities to improve performance which allowed for an incremental evolution of this Egyptian Environmental Affairs Agency focus.

The Egyptian Environmental Affairs Agency addressed the industrial compliance question through a number of venues. First, a substantial portion of industrial pollution could be dealt with by instituting good operational practices at no or low cost or through environmental improvements with very short pay back periods. Accordingly, the Egyptian Environmental Affairs Agency has established in 1994 the National Industrial Pollution Prevention Program; a program dedicated to the promotion of feasible and economically desirable interventions. The program has taken a sectorial approach to industry, and started

its activities in the largest sectors of Egyptian industry (Food and Textiles), but failed to expand its scope due to financial constraints. Moreover, the Egyptian Environmental Affairs Agency has attracted international financing to support major investments needed to address industrial pollution that could not be prevented through financially viable interventions. In parallel, the Egyptian Environmental Affairs Agency was building its own internal capacity in preparation for the end of the grace period, including human resources as well as a network of regional laboratories to support inspections.

### 1.2.2 Effects on Compliance Levels

The Egyptian Environmental Affairs Agency plans had a minimal effect on the level of industrial compliance at the end of the grace period. Operational and procedural delays resulted mainly from the fact that almost all activities relied on international financing. It is only in 1998, that a part of the projects that should have had a demonstration value for the industrial community is starting to materialize. Another major part of the Egyptian Environmental Affairs Agency planned interventions will only see the light at the end of 1998 or early 1999. These will still be useful, but rather late for the grace period, that ended in February 1998.

Nevertheless, the Egyptian Environmental Affairs Agency promotion activities created a higher awareness in industrial leadership that environmental and economic objectives are not always in contradiction; there is a long way to go where they are in consonance. This has contributed to start the environmental transition of Egyptian industry.

A number of other factors had contributed to triggering this transition, including:

- Enforcement efforts of municipalities and other regulatory agencies, as well as NGO's, academics and media increasing interest in the issue.
- The increase in energy prices, coupled with an increase in exploited resources of natural gas allowing the transfer to cleaner fuels.
- Large state investments in infrastructure and especially sewerage systems (networks and treatment plants) have allowed industry effluents to be transferred from Law 48/82 regulations (discharges to the water ways) to Law 93/62 regulations (discharges to the sewer system) with milder standards, thus making the required investments more affordable to industry.
- Developments on the international level (both material and intellectual) of cleaner technology were available to industry.
- Exporters also experience other factors such as the development of legal requirements in importing countries, and the ISO 14000, evolving as the de-facto standard in industry.

### 1.3 The Challenge

The Specter of Law 4 of 1994 having the normal track record of enforcement was hanging above the Egyptian Environmental Affairs Agency's head in the Summer of 1996, 18 months before the end of the grace period. It was clear that only a small portion of industrial establishments would be complying with the requirements at the end of the grace period<sup>1</sup>.

One of the major factors for the successful enforcement of the law was missing.

### 1.3.1 Contextual Constraints

The obvious line of action to be considered was to expedite the implementation of the Egyptian Environmental Affairs Agency's initiatives to increase the level of compliance. However, when other contextual conditions are taken into account, the challenge was bigger. The "environmental transition" sought in the next few years should take place in the context of multiple economic, political and social transitions witnessed by Egyptian society. Structural uncertainties faced by Egyptian industry include privatization, relocation, as well as a more open trade market. These were added to the sheer size of investments needed to achieve compliance for a number of establishments. A few other factors have to be accepted as given:

- Addressing all environmental problems of Egyptian industry at once is beyond all currently allocated human and financial resources at the national level, whether from the regulator or the regulated sides.
- The capacity of industrial establishments to react to sudden pressure is questionable. This is not only because of financial constraints in most of the cases, but also because of technical engineering constraints.
- Only a sketchy characterization of the industrial scene concerning environmental performance is possible. Major sources of compliance information (Self-monitoring and reporting, inspections, citizen complaints and ambient monitoring) are all inadequately functioning, if not non-existent. However, the current state of knowledge allowed for the establishment of a framework for action.

### 1.3.2 Short-term Objectives

Given the contextual conditions, it seemed clear that achieving compliance is not possible in the near future for the larger portion of the industrial community. While keeping the ultimate objective, which is to improve the environmental conditions for the Egyptian people, in mind realistic short-term objectives had to be reconsidered. It was internally agreed in the Egyptian Environmental Affairs Agency that the realistic objective of the next period should be limited to establishing a compliance culture in Egyptian industry as well as creating the maximum possible energy to progress towards compliance. For the dissemination of compliance culture over wide sections of the regulated and the regulating communities and the public at large, Egyptian Environmental Affairs Agency will obviously need a success early in the next phase.

## **2 DEVELOPING AN APPROACH**

### 2.1 Compliance Action Plans

The need to act to achieve the short-term objective required a tool that goes further than the soft approaches of awareness and promotion, a tool that would represent the necessary compromise between legal requirements, the need for real progress to appreciably improve environmental conditions as well as a deep understanding of the current conditions of industry and its need to schedule its environmental investments to adjust to its structural and individual constraints.

These features of the required tool defined it as a plan to comply with legal requirements which priorities and time frame would be organized to maximize social benefits given the polluter's technical and financial constraints. These plans would also help clarify constraints imposed by other parties and put them before their responsibilities. Examples of these constraints is the lack of hazardous waste infrastructure, the delay in the execution of sewerage networks and the meager financing and technical capacity of inspectorates. Last but not least, these plans should help relieving some of the legal enforcement burden for which the Egyptian Environmental Affairs Agency was not adequately prepared.

This plan named "Compliance Action Plan" had a legal basis in Law 4 of 1994 which stated that the grace period, originally granted for three years ending in February 1998, could be extended by Cabinet decision for a maximum of an additional two years given that the establishment proves seriousness in progressing towards compliance. Establishments wishing to extend the grace period should apply to the Egyptian Environmental Affairs Agency six months before the end of the grace period (i.e. August 1997). This application should address the reasons for extension and the actions already undertaken to comply with the requirements of the law.

#### 2.1.1 The Compliance Action Plan Contents

The "reasons for extension" were always understood as the reasons for needing extension, in other words, why was the establishment not able to comply in the three year grace period. The Compliance Action Plan has redefined this expression to be the reasons for granting extension, in other words to what additional efforts does the establishment commit to undertake if granted an extension.

Accordingly, the Compliance Action Plan requested by the Egyptian Environmental Affairs Agency from establishments applying for an extension included three correlated parts:

- The actions undertaken and progress achieved towards compliance, supported by satisfactory documentation.
- The state of compliance expected by February 1998.
- The activities planned to achieve compliance by February 2000.

These parts would, according to the establishment's specific case, address different compliance issues:

- Liquid Effluents.
- Air Emissions.
- Hazardous waste and substances.
- Solid waste.
- Work environment.

The commitments of the establishment to actions would be reflected in:

- A clear implementation schedule and progress reporting.
- The identification of sources of financing of committed actions.
- The establishment of a Compliance Action Plan implementation task force, with clear authorities and responsibilities.

It was also made clear to industry that a possible extension of the grace period is contingent on a continued commitment to Compliance Action Plan implementation. In other words, an extension could be revoked if the Compliance Action Plan is not implemented as agreed.

Annex 1 is an English translation of the Compliance Action Plan framework distributed to concerned parties<sup>2</sup>.

#### 2.1.2 The Unintended Contributions of the World Bank

The World Bank contributed to the process, though unintentionally, through one of the activities that EEAA initiated to increase the level of compliance of industrial establishments: The "Egyptian Pollution Abatement Project", a 5-year project designed in collaboration between the Egyptian Environmental Affairs Agency and the World Bank to address industrial pollution problems. The World Bank financial contribution to the Egyptian Pollution Abatement Project was a soft financial package of 35 million dollars to support environmental investments in industry with which agreements were negotiated in April of 1996. One of the steps of their ratification procedures was their clearance by the Cabinet. Actually, the Cabinet discussed the agreements in December 1996 and asked for a reformulation of certain points. It was only in July 1997, that Egyptian Pollution Abatement Project agreements were renegotiated to address the interests of all parties involved. During this period, the uncertainty concerning the fate of the Egyptian Pollution Abatement Project brought the activities of its Egyptian Environmental Affairs Agency Project Implementation Unit to a near complete halt. It is the Project Implementation Unit that took the initiative of formulating the grace period extension system, which revolved around the submission of Compliance Action Plans by industry.

The World Bank's first contribution was therefore through this unit created to implement Egyptian Pollution Abatement Project. Ironically, it is the delay of ratification of the Egyptian Pollution Abatement Project agreements that freed this unit specialized in industry to manage the grace period extension process. The Bank's second contribution was a document developed for use by Egyptian Pollution Abatement Project to produce "Pollution Abatement Action Plans" for major polluters. The Compliance Action Plan framework produced by Project Implementation Unit has used the Pollution Abatement Action Plan's guidelines as a starting point. Although both documents are environmental planning guidelines, the Compliance Action Plan was meant to be produced with specific conditions by the industry itself, without external support. Accordingly, the Pollution Abatement Action Plans framework had to be substantially simplified. Annex 2 describes the difference between Compliance Action Plan's and Pollution Abatement Action Plan's.

## 2.2 Major Decisions

A number of major decisions had to be taken to outline the system already clearly based on industry submitting Compliance Action Plan's as a support to their request for extension of the grace period. Based on the text of the Law, the Cabinet should ratify the Egyptian Environmental Affairs Agency recommendation concerning this request.

### 2.2.1 Eligibility Criteria for Grace Period Extension

All industrial companies existing at the time Law 4/94 was issued are eligible to apply for an extension of the grace period. However, these could be divided into the following:

- Complying Facilities

Companies complying with of Law 4/94 are not required to submit a proof of compliance. They implicitly state compliance by not applying for extension.

- Non-complying Facilities

Most of the Egyptian industries existing at the time Law 4/94 was issued fall within this category. All companies could apply. Based on the Compliance Action Plan they submit and its supporting documents, these could be divided according to the progress achieved towards compliance as follows:

#### 2.2.1.1 Companies with no proven progress

There are strong reasons to refuse extension for those, since there are no acceptable reasons not to implement no and low cost measures known to substantially decrease pollution loads. The lack of action reflects that the issue is not taken seriously by management. This is especially true for establishments which benefited from audits sponsored by the Egyptian Environmental Affairs Agency which identified these inexpensive measures.

Progress towards compliance was clearly defined in terms of decrease in pollution load. The following actions were not considered reasonable proofs of progress:

- Establishment of environmental responsibility (committee, department, etc.).
- Studies with no follow-up action.

#### 2.2.1.2 Companies with proven progress

Since there are clear benefits to the Egyptian Environmental Affairs Agency, and the environmental cause, to co-opt polluters into environmental planning and consequently monitorable actions, it was decided not to apply very stringent criteria when assessing progress towards compliance. One or more of the following cases could be accepted:

- Achieving substantial progress in compliance concerning priority pollutants "hazardous constituents/ micropollutants" even if no effort has taken place to meet the limitations of less harmful pollutants (temperature, turbidity, dissolved solids, etc.).
- Committed investments potentially reducing load but still not in operation. The least acceptable for such investments is a signed contract for which financial resources are available for execution.
- In companies having more than one establishment, management focus on one of those in the past proves seriousness even if no progress has been achieved in one or more establishments.
- Approved relocation plans are being implemented.

For those establishments which factual reporting on past actions is acceptable, the committed future actions will be assessed as follows.

a Companies committed to full compliance by February 2000

- Review the technical adequacy of committed actions to moving from current compliance status to objectives and consequently with financial plans.
- Review the necessity of the period requested as extension and the possibility of a compressed plan.
- Review the monitoring and reporting system.

In brief, the discussion in this case would be around details, given that other concerned agencies provide their non-objection to the plan.

b Companies unable to commit compliance by February 2000

Even though an applicant may not be committed to full compliance by February 2000, a positive recommendation concerning extension could be made. This is because it is always better to commit progress than not. The Compliance Action Plan provides a better monitoring opportunity than otherwise. However, a strong case should be made to justify the situation. Examples are:

- The funds required for full compliance would drive the company out of business.
- The company faces technological challenges in treating its waste.
- Quick solutions will not be cost effective on the long run (need for asset replacement).
- Plans to move from the current site decrease the useful life of fixed investments at the current site.

In all the cases above, the company should still commit substantial progress towards compliance focused on high priority pollution issues, given the constraints.

2.2.2 Scope of Committed Actions by Industry

The possible extension of the grace period applies only to the requirements of Law 4/94. The question was whether these requirements could be addressed in isolation of requirements of other environmental laws. Technically, they can and legally they should since some of these laws never had a grace period while some others had a grace period that ended more than ten years earlier. Practically, however, it was well known that industry had compliance problems with all environmental laws. Since the proposed system should encourage industry to progress towards compliance, why should other laws be excluded.

The decision was to keep the text of the Compliance Action Plan framework vague concerning this issue by requesting a statement of general compliance status but a plan to comply to Law 4/94 only. Through a consultation system with other regulatory agencies, other environmental laws could be addressed if raised by industry.

2.2.3 Involvement of Other Regulatory Agencies

Other Regulatory Agencies should be involved. This is not only because of the expectation that all environmental requirements will be included in the Compliance Action Plan, but also because of the Egyptian Environmental Affairs Agency's lack of independent executive authorities. It seemed that the review and ratification of each Compliance Action Plan would involve a large number of parties.

In order to decrease the coordination load, it was decided that the highest level of the local administration, the governorate, should be involved. This is because most of the regulatory agencies are represented at this level, and the law of local administration gives it high executive powers. Only specific cases will be referred to the central agencies. Moreover, and in order to decrease the coordination load, it was decided that extending the grace period for discharges to sewerage networks will not be recommended since this issue is managed by the lower municipal level. The Egyptian Environmental Affairs Agency cannot independently have sufficient information concerning the ability of the network and treatment plants to carry excess volumes or pollution loads for specific periods to make a justified recommendation.

The next question was when should the governorate staff be involved. It was found useful to involve them from the beginning to achieve two objectives. The first objective is to benefit from the field information to which they have access or can easily acquire it. The second objective is to create efficient channels of communication and a common discourse, which will be needed for follow-up on compliance as well as for enforcement activities. It was decided that a formal training course on Compliance Action Plan review and follow-up would be delivered to selected governorates before the Compliance Action Plans submission starts.

#### 2.2.4 Negotiations with Industry

It was expected that most of the plans submitted by industry would reflect priorities, interests and/or positions not totally accepted by the Egyptian Environmental Affairs Agency. This would be true whether full compliance is committed too or not at the end of the extended grace period (February 2000). The plan would in any case be reviewed by regulatory agencies and an opinion developed. However, two different alternative courses of actions were considered at this point. The first alternative is to base the recommendation to the Cabinet on an agreement between regulatory agencies on an acceptable course of action. The recommendation may differ from the submitted in the Compliance Action Plan in terms of time, priorities and scope. The second alternative was to discuss the feasibility of this desired course of action with the applicant to reach a balanced Compliance Action Plan reasonably addressing the interests and constraints of all parties. The second alternative was preferred for a number of reasons including a higher efficiency in reaching a more realistic and acceptable course of action. Moreover, this alternative throws the seeds of an unheard of cooperative regulator/regulated culture. Experiences from other societies have shown that a purely confrontational approach has proven inefficient and sometimes ineffective.

These negotiations with industry would put a higher burden for managing the grace period extension process. It needed to be minimized while keeping the eye on the advantages of the selected approach. This was to be achieved in two fronts. First, the negotiated cases could be limited to those where the discrepancy between the regulator and the regulated positions is substantial. In other words, be lenient where the benefits from not being so do not outweigh the costs of allocating scarce management resources to realize them. On the other hand, the number of negotiating parties from the regulatory side should be minimized as much as feasible. Finally, a little breach of the principle of transparency may prove useful. The willingness of the Egyptian Environmental Affairs Agency to negotiate was not disclosed, but would yield to demand by industry.

#### 2.2.5 Public Involvement

This was yet another issue that required extensive in-house discussions. Public participation in public decision making is not the norm, even in issues less complex than industrial pollution abatement. Moreover, involving the public will require a longer time than available before the end of the grace period. However, it was considered unacceptable to open dialogue with industry without a reciprocal attitude towards the community. Symmetry had to be preserved and an exclusionary system is bound to create mistrust. Moreover, public involvement early in the process is likely to mobilize active participation. Such participation was badly needed, given the limited inspection capacity. Finally, it was considered essential for industry to inform the public of its efforts and the constraints it faces to comply. The compromise reached concerning this issue is to especially consider for public involvement the cases in which industries will not be able to comply at the end of the extended grace period. These are the cases for which no legal basis existed for additional extensions. Direct public participation was not considered feasible. Alternatively, a number of active Non-Governmental Organizations (NGO's) in industrial areas were identified to be adequate interfaces / organizers in due course.

#### 2.2.6 Management of Work Load

The Project Implementation Unit had only three professional staff members and was not expected to grow substantially, it was clearly impossible for the Project Implementation Unit to carry the workload, especially since it was uncertain how many companies would apply. It was imperative to rely on external expertise.

The key to financing external expertise was provided by Law 4/94:

- The executive regulations allow the Egyptian Environmental Affairs Agency to hire experts to prepare the report concerning extension.
- It also states that the applicant shall bear the costs of these experts, and
- The Egyptian Environmental Affairs Agency will estimate these costs.

Several alternatives were considered for charging these costs. Finally, it has been decided that it will be linked to the size of the establishment (in terms of work force). Although this had no bearing on the type of expertise and the complexity of the issues, the advantages of a transparent and uniform fee structure outweighed its disadvantages, given a reasonably large number of applicants.

In order to better manage the available resources, it was also decided to stretch the period of submission of Compliance Action Plans to start after the deadline for application (August 31, 1997) and extend to December 31, 1997. It should be noted that this is not totally consistent with the regulatory text, which states that applications should be submitted before the deadline accompanied with the relevant documentation. However, no one objected.

#### 2.2.7 The Complementarity with Enforcement Activities

One of the benefits of the Compliance Action Plan system was to partially relieve the Egyptian Environmental Affairs Agency from the legal enforcement burden for which it was not adequately prepared. Nevertheless, the Egyptian Environmental Affairs Agency will have to prove that it has enforcement teeth, after the grace period has elapsed.

It was imperative to separate the follow-up on Compliance Action Plan implementation from inspections on establishments which did not submit plans. For the former, no legal enforcement procedures will take place unless the establishment refrains from implementing committed actions, and only after due notification. On the other hand, the latter will be subject to inspections which could directly lead to legal procedures. The differential treatment of the two groups should be managed to encourage more establishments to plan their compliance activities and submit their Compliance Action Plans.

### 3 IMPLEMENTATION

Implementation could be divided to a number of distinct phases:

- Phase 1: April 1997 to August 1997  
Activities mainly revolved around the diffusion of information, technical advice to industry and the refinement of the system in parallel with the receipt of applications from industry. Other activities were planned during this period including training of governorate staff, the initiation of a media plan, the refinement of the consultation system for implementation in phase 2. However, these were not implemented due to the confusion resulting from the rejection in principle of the extension of the grace period by the Prime Minister. The next phases were not implemented as planned.
- Phase 2: September 1997 to February 1998:  
Draft Compliance Action Plans should be submitted starting the 1st of September. Revision of these drafts and the finalizing of these documents should take place, with due consultation and negotiations according to the cases. In order to help industry produce their draft Compliance Action Plans in an acceptable form and content, especially in terms of planned actions, formal consultation sessions were planned during this phase. This should have decreased the subsequent negotiation load. This phase was not implemented as planned, as described later.
- Phase 3: March 1998 to Present  
It was clear at this point that Cabinet decisions would not be taken concerning the extension of the grace period. Accordingly, the planned activities concerning the follow-up on ratified Compliance Action Plans did not take place. However, the lack of transparency has made the system continue by inertia. Industry reactions to this confusion varied.

#### 3.1 Phase 1

Actual implementation started in April 1997 with the diffusion of information concerning the grace period extension system and requirements revolving around the submission of a Compliance Action Plan and a commitment for its implementation.

##### 3.1.1 Information Activities:

Informing the largest number of establishments in the shortest time possible using limited resources was resolved through releasing information to strategic actors:

- A media information session in April, diffused information through major newspapers, radio and television.
- A total of 35 information letters to core organizations (holding companies, the federation of Egyptian industries and its sectorial chambers, investors associations and the like) suggesting to them to diffuse information to their member companies. The efficiency of diffusion was supported by the responses from member companies referring to the letters sent by the Egyptian Environmental Affairs Agency.
- A series of meetings in industrial fora .
- A series of training activities in Compliance Action Plan preparation for a selected group of 100 major polluting industries. This group of larger industries was specifically targeted because of the underlying interest in avoiding or at least delaying confrontation with major industries.

Most importantly, a group of consulting firms was invited to this training. The firms, perceiving the business opportunity, launched marketing activities including mailing campaigns to inform potential clients of the Egyptian Environmental Affairs Agency requirements. Moreover, the Environmental offices of selected Governorates where industry is concentrated, participated in this training to prepare them for the next phase when they should have been trained to participate in reviewing Compliance Action Plans.

The repercussions of these strategic information activities were substantial. For example, the Ministry of Public Business Enterprises took the initiative in informing all the companies that belong to it. Mostly large employers, and of which some are major polluters, these companies have been bombarded by information about the grace period extension system directly, through their holding companies, through the Ministry and through industrial chambers as well as media. Most of these companies have requested extension. On another front, the Environmental Pollution Prevention Project (EP3) of the United States Agency for International Development (USAID) have taken the responsibility of informing its client industrial enterprises of the requirements.

A few months later, all consultancy service providers were mobilized for preparing industrial CAP's. These included offices of the Ministry of Industry which provided competitive prices being a government entity. This made the subject of complaints concerning unfair competition from a number of private firms. The market mechanism was at work.

### 3.1.2 System Refinement

Given the late start, a number of system components were not fully developed when the grace period extension requirements were announced in April 1997. It was also clear to the Project Implementation Unit that the workload of reviewing, negotiating and finalizing Compliance Action Plans will exceed the existing resources. As mentioned above, one of the techniques to allow for better planning was to delay the submission of the Compliance Action Plans to start after the end of the application period. Moreover, a standardization of procedures and report formats were developed to help streamline the workload after draft Compliance Action Plans will pour starting September 1st. During this phase, the following documents were developed:

- Terms of Reference for external Compliance Action Plan reviewers.

- A standard review report format allowing for a quick review by the Egyptian Environmental Affairs Agency to insure impartiality and a clear delineation between technical and political decisions.
- Terms of Reference for external advisors to contribute in formal consultation sessions for industry to be held in the Egyptian Environmental Affairs Agency.
- A compilation of an expert database by specialization in industrial sector and/or pollution media to be used for recruitment of external reviewers and advisors.
- A refinement of the suggested system to collect and disburse review charges, insuring adequate financial resources for the system operation.
- Terms of Reference for a media expert and an expert to design the public consultation mechanism were drafted.
- A consultation system with other regulatory agencies including Terms of Reference for the selected agency contact team and a team profile.
- A standard report format for submission to the Cabinet for approval.
- A suggested text for Cabinet decrees clarifying the decision and its contingency on continued commitment to implementation by the establishment. It was also considered to use this decree to fill a gap in law 4/94 executive regulations concerning the ratification and periodical revision by the Egyptian Environmental Affairs Agency of self-monitoring schedules.

Finally, and in order to keep track of the procedures and deadlines to respond to each individual establishment, an electronic database was developed to record the submission, review and response dates concerning of each establishment. The database was also used to analyze information sectorially, to estimate the work load on each category of reviewers, and geographically as a basis for consultation with the local administration.

### 3.1.3 Technical Support

The technical support activities focused on the industrial establishments to help them assimilate the concepts and mobilize their efforts to produce their Compliance Action Plans.

First, and before the Egyptian Environmental Affairs Agency's requirements were made public, three Compliance Action Plans in three different industrial sectors were commissioned to three different consultants by the Egyptian Environmental Affairs Agency<sup>3</sup>. These cases were meant to test the viability of the Compliance Action Plan framework, the type of resources that need to be mobilized and the availability of information to produce it. This activity has also helped the Project Implementation Unit gain experience closer to the field, which benefited the future technical advice to other establishments.

Consultations provided to industry already started at the end of the period but relying exclusively on the Project Implementation Unit, since as described underneath, the mobilization of funds to hire external advisors did not take place.

## 3.2 A Major Blow-down

With all the complexities and workload that this system entailed, it seemed to have been well designed. Minimal unforeseen pitfalls were expected during actual operation starting September 1997.

However, a major factor was missing. A system with such a novel approach should have had stronger political support. In the last week of July, the Prime Minister declared in the monthly Governors' meeting that the extension of the grace period for industrial establishments is rejected in principle. Industry had enough time to comply and extension would shake the credibility of the law and question the seriousness of the state to enforce it.

The very next day, the Project Implementation Unit clarified to the Egyptian Environmental Affairs Agency leadership that this rejection is inconsistent with the regulatory framework which sets the following principles:

- The possibility to extend the grace period.
- The authority of the Cabinet to grant this extension on a case-by-case basis.
- The responsibility of the Minister of Environment to present cases, supported by relevant documents, to the Cabinet for decision.
- The Egyptian Environmental Affairs Agency has the mandate to revise the documentation submitted (which was decided to be in the form of a Compliance Action Plan) and report to the Minister of Environment for presentation to the Cabinet.

The grace period extension became an issue of high political sensitivity, the Prime Minister's position could not be rediscussed. It should have been translated into an Egyptian Environmental Affairs Agency's focus on enforcement activities rather than the promotion of industry's commitment to actions achieving compliance. However, the Egyptian Environmental Affairs Agency already invested in the Compliance Action Plan promotion activities. Informing industry that the grace period ending in February 1998 will not be extended would have compromised the Egyptian Environmental Affairs Agency's credibility.

Internal Egyptian Environmental Affairs Agency discussions went on to the end of August, when the following compromise was reached:

- Continue with the grace period process as previously agreed.
- Fulfill the responsibility of presenting the cases to the Cabinet, given that it will be in its discretion to approve, or disapprove, of extensions on a case-by-case basis.
- In order to avoid political sensitivities and confrontation, the process of preparation of the cases for presentation should take place while keeping the lowest possible profile.

The compromise allowed the Egyptian Environmental Affairs Agency to:

- Implement what was agreed to be an effective means to promote compliance and achieve substantial improvement in both the environmental performance of major polluters and the environmental management culture in the next two years.
- Avoid backing-up from a process that was essentially positively received by industry, which expressed its willingness to commit compliance-oriented actions.

However, the “secrecy” implied by the compromise had, a number of negative effects on the process. These could be summarized as follows:

- First, transparency was in itself a major advantage of the process as designed since it diffuses to the public, industry and, decision-makers a number of messages. These mostly revolved around the efficiency of a cooperative approach. Moreover, information about the actions committed by industry and the degree to which they are fulfilled should allow for public scrutiny and eventually mobilization in terms of support and /or pressure. This would be inachievable since plans for public consultation, as well as media plans, were totally frozen.

It was hoped at the time that this is only delayed until the first cases are presented to the Cabinet, which should trigger a more open reaction. Although it cannot be totally foreseen, whether the Cabinet chooses to approve or disapprove of extension, the low-key constraint will be broken.

- Second, the system developed for financing the Compliance Action Plan review and monitoring of implementation relied on raising funds from applicants based on the text of the executive regulations allowing the Egyptian Environmental Affairs Agency to recover the costs, it estimates, for the production of reports to be presented to the Cabinet. The system was designed and reviewed by Egyptian Environmental Affairs Agency financial advisors, and was ready for clearance by the Egyptian Environmental Affairs Agency CEO when the process was disrupted by the political developments concerning the grace period extension. It was decided not to require applicants to pay these revision fees to keep the agreed upon low profile. Alternatively, resources would be mobilized from internal sources.
- Third, the most critical effect of these developments concerns the freezing of efforts to coordinate with other concerned agencies. The lack of a coordination mechanism can put the whole process at risk, since the Egyptian Environmental Affairs Agency is not the only agency concerned with the environmental performance of industry.

### 3.3 Phase 2

At the end of the specified application period (31 August 1997), 190 companies requested extension, representing almost 300 plants. These were of a heterogeneous profile. Both privately and publicly owned companies were represented as well as all sectors of industry, including 6 power plants, distributed in 23 out of 26 governorates composing the national territory. The last days before the deadline saw an exponential growth in requests, which reflected the expected eagerness of industry to extend the grace period.

Early in this phase, the results of a survey of activities undertaken by industry to comply with the law since its issuance started materializing. These results supported the earlier perception that industry has made a serious effort to comply, especially larger establishments, but it still has a long way to go; the perception upon which the Compliance Action Plan system was based.

The figures were more surprising. The results of the survey indicated that Egyptian industry has invested more than 3 billion Egyptian Pounds (LE) in environmental investments during the last few years. This figure includes a few major projects totally shifting production

to cleaner technologies, but also hundreds of millions were spent by state-owned enterprises to minimize the environmental effects of their discharges through waste minimization, recycling and treatment. The other important result was that most of these funds were mobilized locally, although only international financing was highly publicized.

### 3.3.1 Compliance Action Plan Review

Unexpectedly some Compliance Action Plans were submitted in the first days of September. Companies did not all wait for the last days of December to submit their Compliance Action Plans it was clear that these were the companies that actually had an environmental plan, and did not produce it only to extend the grace period.

The process went as designed in the early stages of content revisions. However, companies that completed the Compliance Action Plan's contents, called for another critical decision. Since the formal consultation process with other regulatory agencies was put on hold, the report and the recommendation concerning a possible extension to be submitted by the Egyptian Environmental Affairs Agency for Cabinet ratification can only reflect Egyptian Environmental Affairs Agency's opinion. It was not possible to initiate such consultation without breaching the low profile compromise already agreed with Egyptian Environmental Affairs Agency's leadership.

### 3.3.2 Consultation with Regulatory Agencies

To develop an opinion concerning the seriousness of activities already undertaken to comply with the law did not represent a problem. Nor was the technical assessment of the adequacy of committed future actions to control currently non-complying aspects. The problem was basically two-fold, the insufficiency of field information to assess the effects of pollution allowed to continue during an extended grace period on the environment and the community, the other side of the problem is the political sensitivity of recommending to the Cabinet actions that fall within the domain of other agencies.

A decision was taken at that point, that it is Egyptian Environmental Affairs Agency's assessment and opinion, which will be submitted to the Cabinet. Whatever deficiency in the recommendation will be discussed in the Cabinet; an awkward situation which were to be avoided if consultation took place beforehand.

### 3.3.3 Negotiations with Industry

Negotiations with industry took place in only a few cases in which consultation with other regulatory agencies was essential. The low-profile attitude was preserved since this consultation mostly relied on personal contacts, and no formal system of consultation was put in place.

### 3.3.4 Reliance on Available Resources

Internal resources to replace the funds raised through application fees were never mobilized. The Project Implementation Unit has relied mainly on its existing staff to review draft Compliance Action Plans. Moreover, valuable support to hire external reviewers was contributed by Egyptian Pollution Abatement Project's technical and institutional support component (supported by the Finnish government)<sup>4</sup>. This contribution did not, and could not, cover all the activities that were planned during this phase.

Until the end of this phase, the Project Implementation Unit continued the revision, finalization and report production including the recommendation concerning the extension of the grace period. But because of meager resources, the process took longer than anticipated. This process that should have ended with this phase spilled to the next.

#### 3.3.5 The Expansion of the Compliance Action Plan Scope

The deadline for accepting requests (August 31, 1997) was linked to the legal requirements to extend the grace period. Given the developments, and the uncertainty concerning such extensions for those who applied before the deadline, it was found meaningless to reject additional Compliance Action Plans. It was decided by the Project Implementation Unit to accept more submissions while specifying to the applicants that it will bear no relation to the possibility of extending the grace period but will be taken into account in inspection activities. This approach was well received by industry and applications continued.

Additional major developments took place late in 1997, which showed that the Compliance Action Plan approach has established roots. The association of investors of Sadat City (a new industrial city) contacted the Project Implementation Unit to express its will to submit Compliance Action Plans for all its members (more than 100 industrial plants). The association was fully aware that no extension will be granted, but they thought it was an adequate approach to ensure that their members are compliant or will be compliant within a specific time period. This was essential in a growing industrial city before environmental problems get out of control as has happened in other industrial cities. The Project Implementation Unit has welcomed the approach and has received and commented on the Compliance Action Plan's submitted from Sadat City.

The Chamber of building materials industries of the Federation of Egyptian Industries has also contacted the Project Implementation Unit to investigate the possibility of coordinating the preparation of Compliance Action Plans by its 1,200 members. The approach was also welcomed, and several meetings have taken place, but the Chamber did not go further in the process.

On another front, by the end of 1997 the local administration has applied enforcement pressure on brick kilns. This industry using old technology is definitely polluting, like so many others, and the reasons pressure was applied specifically on this one are unclear. The important point is that the local administration, knowing that it cannot close down hundreds of these kilns, has advised their owners to submit Compliance Action Plans to the Egyptian Environmental Affairs Agency. Almost 300 submissions from these kilns were received in 2 months. In order to support this positive movement in an industry lacking the technical capabilities, the Egyptian Environmental Affairs Agency has initiated a pollution abatement technology study to provide objective technical information to these plants as a guidance to their efforts.

#### 3.3.6 Plans for the First Egyptian Environmental Affairs Agency Inspections

The Egyptian Environmental Affairs Agency was preparing for the first inspection campaign planned to start the next day the grace period ends. The original idea was to exclude from inspections, as a first enforcement activity of the Egyptian Environmental Affairs Agency, companies, which did apply for extension and accordingly submitted a Compliance Action Plan. The logic was that those who already "confessed" and promised to "repent", would be given some time to check whether they hold their promises. These need to be

included in a follow-up, and not an inspection, system. However, as a result of the decreasing interest in the Compliance Action Plan approach, and the low confidence in the submitted plans given the lack of consultation, this principle was questioned.

This issue was resolved through a decision that all the inspections planned for the first two months (56 plants)<sup>5</sup>, some of which applied for extension, will only be followed by mild notifications evolving later for those who do not take issues seriously to legal enforcement procedures. Moreover, these inspections would focus on low cost measures to achieve the following:

- Avoid unproductive arguments about the financial capacity of industry to implement high cost investments. This is especially true for large state-owned enterprises facing real financial constraints.
- Avoid the need for scarce equipment and measuring devices, and arguments on the accuracy of measurements.
- Mobilize higher public support, since most of these measures are needed where production inputs and /or intermediate products are wasted due to deficient management.
- Capitalize on the potential of these measure to be implemented quickly to achieve the highest possible reduction in pollution loads in the shortest delay.
- Finally, it will also be an effective means to test the accuracy of information submitted in the Compliance Action Plans.

The inspection teams were formed from research centers and other regulatory agencies . Only a few members were internal to the Egyptian Environmental Affairs Agency. This approach was a necessity since Egyptian Environmental Affairs Agency has not built its inspection team yet, but it was also useful in overcoming fragmentation of responsibilities, as prescribed in current legal instruments dealing with the environment, among several agencies; a major obstacle to effective implementation of enforcement activities.

This activity has been the first practical use of the Compliance Action Plan's, since inspectors used the valuable documents as background information before site inspections.

### 3.4 Phase 3

It is difficult to report on this phase which started March 1, 1998 after the end of the grace period, since developments concerning the management approach to industrial compliance are still unfolding. However, major trends and patterns could still be outlined.

#### 3.4.1 A Stagnant Period

Test cases were never submitted to the cabinet and it was clear at this point that the rejection in principle of the grace period extension will not be challenged. It could not be challenged by the Egyptian Environmental Affairs Agency as a government entity, but it was also not challenged by industry, the other major stakeholder of this decision. This may have been for a number of reasons, which hampered collective action by industry.

- The Federation of Egyptian Industries has had a major change in management in this period. Neither the new nor the old management was in a position to get into a confrontation concerning this issue;

- The Federation of Egyptian Industries and its sectorial chambers had other important issues on their agendas (such as dumping, export promotion, and the effects of removing import barriers on local industry) for which they needed the Cabinet support;
- Information concerning this rejection was never confirmed by the Project Implementation Unit, still hoping unjustifiably to see this decision reversed; and finally
- Industry may have been also interested in avoiding closer scrutiny to follow up on its Compliance Action Plan implementation.

Given this deadlock, the Project Implementation Unit has approached a local conflict resolution research center. This center should have taken the lead in opening a dialogue highlighting the issues and stakes of the two different management approaches as a means to move the stagnant situation. However, the effort to prepare for this dialogue was an additional burden on the Project Implementation Unit that could not be borne, given the high and growing workload. A workload especially growing since the Project Implementation Unit was integrated in the Egyptian Environmental Affairs Agency's structure under a different mandate. The Industrial Compliance Unit has taken the mandate of its predecessor in addition to other industrial related activities dispersed in the Egyptian Environmental Affairs Agency. The dialogue was never opened.

#### 3.4.2 A State of Confusion

As a result confusion started to increase from the beginning of this period. Decisions awaited by industry concerning the grace period were never taken while regulatory agencies including Egyptian Environmental Affairs Agency started inspecting compliance with the law.

The reaction of industry to this confusion varied along a wide spectrum reflecting different degrees of seriousness to move towards compliance. While some establishments started implementation and reporting, others insisted on having their requests for extension accepted claiming that their commitment to action is hampered by the lack of a clear stand from the Egyptian Environmental Affairs Agency. The Industrial Compliance Unit, knowing that the Egyptian Environmental Affairs Agency does not have the authority to grant extensions, was elusive concerning the latter group, and could only be encouraging for the former.

Another contributor to the state of confusion and growing pressure were consultants. As a marketing approach, consultants which were hired by industry to prepare their Compliance Action Plan's have linked their final payments to the acceptance of the Compliance Action Plan. The Project Implementation Unit could only, given the circumstances, inform industries of the completion of the Compliance Action Plan requirements but never of its acceptance. A large number of contracts are still hanging to date and consultants are complaining of the vagueness of the Egyptian Environmental Affairs Agency's position.

#### 3.4.3 The Role of Local Administration in Promoting Compliance Action Plan's

Local administration has started promoting Compliance Action Plan's in late 1997 especially among brick kilns. Later, after the end of the grace period, during its normal inspection it was faced with industries questioning such activities since, as they claimed, their Compliance Action Plan's were accepted by the Egyptian Environmental Affairs Agency,

and a cabinet decision concerning their grace period extension is due any time<sup>6</sup>. Unmistakably, the local administration contacted the Egyptian Environmental Affairs Agency, which informed it of the compliance program and asked it to follow-up on its implementation taking necessary legal actions if not implemented as submitted.

Continuous enforcement activities have supported the validity of the Compliance Action Plan approach. Needed corrective actions cannot be implemented in a short period. Priorities should therefore be set in a way agreed and ratified by the regulatory agency. The local administration has realized it, but lacks the technical capacity to take a more positive attitude towards it. It attempted to resolve the issue through an unexpected move. Local administration had started requiring industries renewing their operating licenses to contact the Egyptian Environmental Affairs Agency for environmental compliance purposes as a requisite for license renewal. Surprisingly, similar requests originated simultaneously from different cities and towns. Although, the Egyptian Environmental Affairs Agency perceived the opportunity to promote compliance, it would have been an unbearable burden for which the Egyptian Environmental Affairs Agency has no actual mandate. Local administration has been informed that the Egyptian Environmental Affairs Agency has no mandate concerning license renewal.

Finally, a number of governors, the highest authorities in local administration seemed to have assimilated the benefits of an approach promising an improvement of environmental conditions without threatening the continuing operation of polluting industries, large employers of the local work force and contributors to the economic welfare of the population. Compliance Action Plan's became a normal reference in a number of governors' communications with Egyptian Environmental Affairs Agency concerning industrial pollution as well as with industries falling in their administrative domain.

#### 3.4.4 Egyptian Environmental Affairs Agency's Current Revived Interest

It is now (September 1998) clear to all parties that the grace period extension decisions will never be taken by the Cabinet. Accordingly, the issue has lost most of its political sensitivity. The Compliance Action Plan could now be decoupled from the grace period extension. The Egyptian Environmental Affairs Agency's revived interest could be exemplified in a number of activities currently undertaken by the Industrial Compliance Unit as cleared by the Egyptian Environmental Affairs Agency's management.

- Formal contacts to industry to report on their progress in Compliance Action Plan implementation;
- The cooperation with local administration to follow-up on implementation is being revisited;
- A dialogue with the association of iron foundries to develop a collective agreement concerning progress towards compliance; and
- A system is being designed to incorporate environmental requirements in license renewal (the issue originally raised by local administration) taking the milestones of a Compliance Action Plan as references for temporary renewable licenses.

Moreover, outside the Industrial Compliance Unit other units of the Egyptian Environmental Affairs Agency developed Compliance Action Plan frameworks for hotels and hospitals and started requesting these establishments to submit their Compliance Action Plans. Odd cases, such as an airport, a maritime transportation company and a wastewater

treatment plant were received by the Egyptian Environmental Affairs Agency. The Egyptian Electricity Authority is currently developing a Compliance Action Plan for each of its power plants, and not only the six plants for which it originally requested a grace period extension.

#### 4 CONCLUSION

This paper could have been written in a number of forms. Its anecdotal approach was selected to try to give the flavor of the real experience of the author. Stories of our childhood usually ended with a strong morale, and this one has its own: The fate of the war is not decided in one battle.

The system devised to manage the extension of the grace period has failed in most of its aspects. It had all the elements needed to have a program fail:

- A tight time constraint.
- Scarce human and material resources.
- Weak political support.

Introducing a management system entails a number of inter-related elements that should be developed in consonance to keep the system in equilibrium during the start-up phase. If this system is introduced within a government, or any large bureaucracy, it is also subject to forces of institutional inertia, that easily transform initiatives to change to unnoticeable scratches on its surface. A successful change in bureaucracy requires the mobilization of extra-institutional alliances, that given the three above-mentioned elements was not possible in the right moment when it was needed.

It was, in a way, not wise to initiate such a program 10 months before the end of the grace period with three professionals on board. It was more so to insist on preserving the system inertia when it was clear that weak political support had turned into outright rejection.

However, there was a good product in hand and the market was in dire need for it. One can claim at this point that the Compliance Action Plan and its underlying cooperative approach are now more than scratches on the surface. The approach was successfully incubated but it still needs to be nurtured to strengthen systemic roots in the Egyptian environmental scene. The tool was also successfully tested and has proven its usefulness and versatility. Its development is now a standard component in environmental management courses tailored for industry cadres in Egyptian universities. It is only the establishment of the management system that failed temporarily.

**ANNEX 1****COMPLIANCE ACTION PLAN (CAP)**

(Framework)

**1 BACKGROUND**

The environmental law 4/94 has granted the existing industrial establishments a grace period of three years starting from the issuance of its executive regulations (February 95) to meet its requirements. The grace period can be extended for 2 years, given that the establishment proves seriousness in progressing towards compliance.

All establishments expecting not to comply with the requirements of the executive regulations by February 1998 are required to formally apply for extension 6 months before the end of the grace period (August 1997). This application should address the reasons for the extension and the actions already undertaken to comply with the requirements of the law.

The Egyptian Environmental Affairs Agency requires the establishments to provide satisfactory evidence of the progress achieved and the actions to be undertaken during the extension period to ensure compliance at its end, according to the attached framework.

**2 OBJECTIVES**

The immediate objective of the Compliance Action Plan is to bring the applicant facility in compliance with environmental laws and regulations. The ultimate objective is to strengthen environmental commitment and to incorporate environmental management systems and cleaner production technologies in the Egyptian industry.

**3 SCOPE**

The Compliance Action Plan should accomplish the following:

- Translate the planned technical interventions to conceptual engineering designs.
- Reflect financial requirements and limitations.
- Outline an environmental management system integrated in the facility's planning and management systems to respond to evolving environmental requirements.
- Form the basis of the facility's agreement with the Egyptian Environmental Affairs Agency on a phased plan towards environmental compliance.

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## 4 DEVELOPMENT OF THE CAP

### 4.1 Draft Cap

The Compliance Action Plan is the facility's document and throughout the phases of its development, the full involvement of its concerned personnel as well as its management full consent should be ensured.

The following issues should be addressed in the draft Compliance Action Plan report:

#### 4.1.1 Environmental Status

- Provide Plant information as described in Appendix A.
- A list of environmental studies conducted for the facility in the last three years (copies of these studies should be attached).
- Report on actions undertaken and progress achieved towards compliance, supported by satisfactory documentation, since the issuance of the Law 4/94.
- Identify the state of compliance with relevant environmental laws and regulations expected by February 1998 concerning:
  - liquid Effluents, for each point of discharge, specifying discharge rates, source(s) by industrial process. A table comparing the average concentration of pollutants to the maximum allowable limits according to Law 4/1994 should be attached.
  - Air Emissions, for each point of discharge (stacks and fugitive emissions), specifying source(s), emissions rates, stack heights and fuel used if applicable. A table comparing the average concentration of pollutants to the maximum allowable limits according to law 4/1994 should be attached.
  - Hazardous materials used in the facility and the current management system compared to the requirements of Law 4/94.
  - Solid and Hazardous waste, identifying sources by industrial process and the current management system compared to the requirements of Law 4/94.
  - Work environment, specifying locations where pollutants concentration exceed the maximum allowable limits according to law 4/1994. A list for these pollutants with their concentrations should be attached.
- Existing Pollution Control Facilities
  - Sewer layout diagram.
  - Description of in-process and end-of-pipe treatment of liquid waste and air emissions and the efficiency of the existing treatment facilities.
  - Availability of space for installing pollution treatment units.

#### 4.1.2 Planned activities for Environmental Compliance

##### 4.1.2.1 Polluting discharges

- Specify proposed actions to mitigate non-compliance problems during the grace period including:
  - Process changes and / or control
  - Improved maintenance measures
  - Input substitution
  - Material recovery and recycling
  - End-of-pipe treatment

##### 4.1.2.2 Hazardous waste and materials

- Describe measures to upgrade management of hazardous waste and material, according to law 4/1994, including a contingency plan.

##### 4.1.2.3 Work Environment

- Specify actions to be undertaken to bring the work environment in compliance with law 4/1994.

##### 4.1.2.4 Monitoring of Industrial Emissions

- Describe present system, and identify planned actions to establish a self-monitoring scheme according to the requirements of Law 4/94.

#### 4.1.3 Environmental Policy and Management System

- The facility should inform the Egyptian Environmental Affairs Agency of the composition of the task force -with defined roles, responsibilities and authority as well as adequate resources- designated to ensure that the Compliance Action Plan is implemented as committed and to report on progress towards its implementation to top management.
- During the extension period, this task force will also be responsible for developing the facility's environmental management system. This would include, but is not limited to:
  - Outline the company strategy on pollution abatement, cleaner production, energy conservation, waste minimization, water recycling and by-product recovery;
  - Designate the responsibility for achieving environmental objectives and targets to each relevant function and level of the organization;
  - Identify measures to strengthen awareness of management, supervisors and workers of environmental issues and regulatory requirements relevant to their areas of responsibility;

- Develop a plan for on-the-job training on cleaner technologies, operation of waste treatment systems, and emissions monitoring; and
- Identify measures to be undertaken when monitoring information indicates non-compliance or unacceptable degradation of the receiving environment

#### 4.1.4 Action Plan

##### 4.1.4.1 Implementation Schedule

- A summary implementation schedule should be included. This schedule should delineate the technical and managerial aspects of the compliance plan, the financial plan, targeted deadlines for major activities, as well as the anticipated reductions in pollution loading, and the resulting progress towards compliance.

#### 4.2 Financial Plan

- Delineate financial requirements in terms of investments and operational costs as well as potential benefits.
- Identify sources of financing for the activities that will be implemented by the facility.

##### 4.2.1 Progress reporting

- Periodical reporting -at 6 months intervals- to the Egyptian Environmental Affairs Agency will be required to summarize the progress on the action plan as well as forth coming activities.

##### 4.2.2 Feedback to the Draft Compliance Action Plan

The draft Compliance Action Plan, cleared by the establishment Board of Directors, will be submitted to the Egyptian Environmental Affairs Agency for review and comments. The feed back solicited by the Egyptian Environmental Affairs Agency, as needed, from the local administration as well as other concerned parties will be included.

#### 4.3 The Compliance Action Plan Final Document

A revised Compliance Action Plan should be prepared by the facility to incorporate changes based on the comments, if any, of the concerned parties. The final document will be annexed by the Egyptian Environmental Affairs Agency to its recommendation concerning extension of the grace period submitted to the Cabinet of Ministers.

**APPENDIX A****FACILITY INFORMATION FORM**

## I. General Information

Company:.....  
 Facility Address:.....  
 CEO:.....  
 Size of labor force:.....  
 Major production activities:.....  
 SIC Code:.....  
 Contact Person:.....  
 Address .....

Phone .....Fax .....

## II. Production Processes

## Process Information

- Process flow diagrams.
- Material, water and energy balances.
- Map showing facility layout illustrating main uses, points of discharge and sources of emissions.

## Production Information

## ● Products

Products	Production Capacity (t/y)	Average production (t/y)

## ● Raw materials and auxiliaries

Main Raw Materials	Average (t/y)	Maximal Consumption Consumption (t/y)

## ● Water

Water Consumption	Amount (m <sup>3</sup> /y)	Supply Source
Domestic Water		
Process Water		
Cooling Water		

## ● Energy

Type	Amount/year	

III. Surrounding Environment

- Map of plant location, identifying receiving water body, surrounding land uses, distances to human settlements.

IV. Future Plans , if any

- Relocation plan
- Expansion plan
- Major process modifications

**ANNEX 2****ON THE DIFFERENCE BETWEEN THE COMPLIANCE ACTION PLAN AND POLLUTION ABATEMENT ACTION PLANS**

Both the Compliance Action Plan and the Pollution Abatement Action Plans are environmental planning exercises at the industrial facility level. For both a central element is an in-depth plan for environmental upgrading, covering technical solutions, their costs and a timetable.

However, their emphasis and scope of activities may differ.

	Compliance Action Plan (CAP)	Pollution Abatement Action Plans (PAAP)
• Objectives	Compliance	Env. soundness
• EMS	Initiation	Integration
• Contingency schemes	Hazardous material	Comprehensive
• Training	Env. Personnel	Plant personnel
• Monitoring	Emissions	Env. performance
• Financing	Affordable	Substantive

The main differences between the two planning exercises are their time frame and objectives. While the Compliance Action Plan is a short term plan to ensure compliance with applicable laws and regulations, the Pollution Abatement Action Plans is a longer term plan with an ultimate objective to secure environmental compatibility and economic viability of the establishment .

In the long term two factors, that are fixed on the short term, become variable:

- The plant configuration.
- The environmental requirements.

**ENDNOTES**

1. A subsequent survey conducted in July- October 1997 and which covered 1000 larger industrial establishments, has substantiated this perception.
2. The CAP framework has benefited from the comments of several parties including EEAA staff and advisors as well as the Finnish staff of a EEAA international project (Egyptian Pollution Abatement Project's technical and institutional support component, supported by the Finnish Government) in EEAA. Other useful comments have been solicited and received from EPA office for compliance and enforcement after distribution has begun. These comments have been used in the subsequent management of the subject but are not reflected in the annexed CAP framework.
3. These CAP's were supported by the Finnish contribution to the Egyptian Pollution Abatement Project.
4. We acknowledge the understanding of Dr. Alec Estlander, the Egyptian Pollution Abatement Project Finnish project manager of the importance of the activities which allowed for an ideal cooperation with the PIU during this crisis situation.
5. These plants were in the greater Cairo and Alexandria regions, where a large proportion of Egyptian industry is located. Limiting the geographic coverage of this first inspection campaign simplified substantially the logistical demands of inspection. Moreover, the concentration on large industrial areas was expected to have the highest deterrence effect. The plants were selected to include private and public companies from different sectors but all with considerable size.
6. PIU communication concerning the completion of the CAP requirements, also mentioned that a report concerning the extension request was prepared for presentation to the Cabinet. This may have given the impression of acceptance by EEAA, which was not always true. But since only a few cases were negotiated with industry, EEAA opinion was not clarified and the reports included positive as well as negative recommendations.

