PERFORMANCE AUDIT

DEPARTMENT OF ENVIRONMENTAL QUALITY

Agencywide Issues

Report to the Arizona Legislature
By the Auditor General
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Report #94-1

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February 8, 1994

Members of the Arizona Legislature

The Honorable Fife Symington, Governor

Mr. Edward Z. Fox, Director
Arizona Department of Environmental Quality

Transmitted herewith is a report of the Auditor General, A Performance Audit of the Arizona Department of Environmental Quality, Agencywide Issues. This report is in response to a September 3, 1992, resolution of the Joint Legislative Oversight Committee and is the final in a series of four audits.

The Department is still in the process of developing the basic foundations necessary to effectively regulate environmental programs. Overall, we found the agency has endured management problems throughout the years, problems which have crippled its ability to adequately carry out many of its responsibilities. For example, high turnover and frequent intra-agency transfers have weakened the quality of supervision throughout the Department. Furthermore, employee shortages in some program areas have impaired the Department's ability to meet critical regulatory mandates. Department management has begun to address problems cited in our audits; however, it is too early to judge the ultimate effects of many of their efforts.

My staff and I will be pleased to discuss or clarify items in the report.

This report will be released to the public on February 9.

Sincerely,

Douglas R. Norton
Auditor General

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SUMMARY

The Office of the Auditor General has conducted a performance audit of the Arizona Department of Environmental Quality (ADEQ) - Agencywide Issues, pursuant to a September 3, 1992, resolution of the Joint Legislative Oversight Committee. This performance audit was conducted pursuant to A.R.S. §§41-2951 through 41-2957, and is the fourth and final audit of ADEQ being conducted by our Office.

Our four audits found significant problems agencywide in all aspects of the Department's regulatory efforts. Monitoring and enforcement have been limited in all program areas. ADEQ has not inspected all facilities, nor has it initiated enforcement actions against noncompliers in many instances. The Department is also behind in issuing permits to facilities that have the potential to contaminate Arizona's air, water, and soil. We found significant backlogs in the Aquifer Protection Permit Program, Hazardous Waste Programs, and Air Quality Program. ADEQ also has not been able to develop rules packages in a timely manner.

The Department has begun to address problems agencywide by instituting a Total Quality Involvement (TQI) process, developing a strategic plan, and conducting an environmental risk assessment to prioritize agency activities. However, because none of these actions have been completed, the Department has not yet realized significant benefits from them. In addition, in response to our audits, the Department has made improvements in some program areas and developed initiatives for change in others.

This final audit identifies several agencywide issues relating to management and staffing resources, information management, public involvement and progress of the TQI process which underlie many of the problems found in the previous audits.

To Be Effective, ADEQ Must First Improve Management Throughout The Department (see pages 7 - 13)

ADEQ needs to upgrade the quality of its management and supervision to improve program effectiveness. Management turnover and instability has been high at all levels. For example, the Department has had four directors since it was established in July of 1987. In addition, more than two-thirds of all section managers and unit supervisors within ADEQ have been in their current assignments less than two years. In fact, 39 percent of all section managers and unit supervisors have held their current assignment less than a year. Although managers and supervisors are frequently drawn from the ranks of the technical staff, ADEQ has no formal management training program.

Not only are managers changing positions frequently, the staff they supervise also have a high rate of turnover and movement. When staff turnover and transfers are included, approximately one-third of all positions at ADEQ have changed in each of the past two years. The combination of management and staff's frequent changes has significant effects on operations throughout the Department. Limited staff training, and few policies and procedures to guide them, further decreases productivity.

Staff Problems Impact ADEQ's Regulatory Effectiveness (see pages 15 - 19)

Although management problems contribute to ineffective programs, the Department also appears to lack sufficient staff to carry out its regulatory responsibilities. We found that several critical ADEQ programs have an insufficient number of staff and, as a result, are overextended. For instance, although more than 4,000 underground storage tanks should be inspected annually, there are only four staff assigned to this function. It is not surprising then that an estimated total of 816, or about 20 percent of the tanks, are inspected per year. In addition, the Leaking Underground Storage Tank program does not have enough employees to address its backlog of over 2,000 sites. New cases are coming in as fast as the program is resolving old cases. We also found that ADEQ funding has not kept pace with added regulatory responsibilities.

Except for programs with clearly documented staffing needs, such as the Drinking Water Program, the Department should first address problems that would allow it to make better use of its current staff resources before it requests more funding. The Department can improve program effectiveness, for example, by addressing management and staff turnover, and by completing the TQI effort that management initiated to streamline the ADEQ's business processes. The Department may also address some resource shortages by prioritizing its activities through Arizona's Comparative Environmental Risk Project (ACERP). Finally, it can seek increased funding through fees or appropriations.

ADEQ Needs To Improve Information Management (see pages 21 - 24)

ADEQ regulatory efforts are hindered by poor information. For example, several critical requirements of the Safe Drinking Water Program cannot be monitored or enforced because the Department lacks sufficient information. Our recent audits found problems throughout the Department, including: lack of data, inaccurate, conflicting, and duplicative data, and lack of adequate information to track regulatory activities. We also found that ADEQ needs to strengthen security control over important documents. In response to our audits, the Department has initiated agencywide efforts to begin addressing information problems.

Statutory and Administrative Barriers Impede Public Input In ADEQ's Permitting And Rules Development Processes (see pages 25 - 28)

Statutory and administrative changes are needed to facilitate public input. Our survey of persons who participated in ADEQ permit hearings and rules development processes felt their input made little difference. Their perceptions were that the Department had already reached a decision by the time of the hearing, or their comments were not considered in the final decision.

Several factors may cause the dissatisfaction of the individuals we surveyed, including a misunderstanding by some of the purpose of many public hearings. However, there are factors that impede the public's input. Public hearings for proposed permits are not mandatory in most cases and are left to the Department's discretion. In addition, procedures for permit hearings vary between programs, thus potentially confusing the public further. Moreover, meaningful public input for rules development is also limited by statutory barriers that impact all State agencies.

ADEQ Needs To Further Strengthen The Management Of Its TQI Process (see page 29 - 31)

Although ADEQ has initiated a Total Quality Involvement (TQI) effort as its primary strategy for strengthening operational performance, it is too early to evaluate its success — only 8 of the agency's 33 TQI teams have completed their reports.

Although it is too early to evaluate the success of TQI, ADEQ top management needs to become more involved to ensure that the Department receives a proper return on its investment. ADEQ top management has not adequately tracked the status of implementation efforts or assessed the effect of TQI recommendations on agency operations. It has, however, recently initiated changes to address those shortcomings.

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INTRODUCTION AND BACKGROUND

The Office of the Auditor General has conducted a performance audit of the Arizona Department of Environmental Quality (ADEQ) - Agencywide Issues, pursuant to a September 3, 1992, resolution of the Joint Legislative Oversight Committee. This audit was conducted under the authority vested in the Auditor General by Arizona Revised Statutes (A.R.S.) §§41-2951 through 41-2957. This is the fourth and final audit conducted in response to the resolution. To date, the Auditor General has conducted reviews of ADEQ's Office of Water Quality (report 93-5), Office of Waste Programs (report 93-8), and ADEQ Management Functions (report 93-4).

ADEQ's Mission Important

The legislative intent for creating ADEQ was to consolidate responsibility for environmental management with the purpose of increasing effectiveness, efficiency, and public acceptance of environmental regulation. ADEQ has primary responsibility for administering and enforcing a wide variety of regulatory programs. These regulatory programs involve a large number of facilities and affect many of the state's businesses and private citizens. For example, ADEQ is responsible for regulating 1,792 drinking water systems, 648 facilities that emit air pollution, 4,096 facilities that operate underground storage tanks (UST), and approximately 900 facilities that generate or handle hazardous waste, as well as other facilities that have the potential to contaminate the state's air, water, and land.

ADEQ Has Not Effectively Met Its Primary Responsibilities

The Department performs many regulatory activities inadequately. Work performed in our other audits, as well as work performed in this audit, show that the Department has not been able to adequately permit and inspect all facilities or take enforcement actions against all noncompliers. For example:

- <u>Office of Water Quality</u> - In the 6 years since the Aquifer Protection Plan Program began, the Department has permitted only 91 facilities, while between 622 and 900 facilities remain to be permitted by the year 2001, as required by legislation. In addition, we found that ADEQ has done little to ensure that the 3,178 facilities that have potential to contaminate Arizona's water resources comply with water quality laws. Few are regularly inspected or are required to submit monitoring information. Inspections are important because most facilities that were monitored and inspected were found to be out of compliance. Furthermore, we found that although there were 251 drinking water enforcement cases in 1992, the Department took formal enforcement action only 14 times.

- **Office of Waste Programs** - Although 52 percent of the facilities with underground storage tanks inspected during 1993 were found to be out of compliance, only 985 (24 percent) of the 4,096 facilities with underground storage tanks have been inspected. Moreover, ADEQ has yet to address 838 sites that have been contaminated as a result of leaking tanks and does not know the current status of the other 1,487 sites.

  Furthermore, since 1988 the Department has re-permitted only 8 hazardous waste transportation, storage, and disposal facilities. Another 15 facilities, some of which have been in the re-permitting process for over 10 years, still need to acquire a new, more stringent permit required by EPA regulations. In addition, although ADEQ had a total of 916 hazardous waste violation cases between October 1988 and April 1993 (closing 684, with 232 open as of April 1993), it initiated formal enforcement actions on only 55 (6 percent) cases. Of these 55 cases, the violations continued for an average of nearly 2 years before ADEQ took formal action.

- **Office of Air Quality** - Due to resource limitations, ADEQ inspected only 24 (67 percent) of the 36 major air pollution sources requiring annual inspections during Federal fiscal year 1993. Furthermore, when violations were found, the Department often did not follow up with subsequent inspections. This was true even in cases where severe violations were found.

  Also, as a result of new State and Federal requirements, ADEQ will have to reissue all air quality permits by the year 2000; however, unless the Department is able to eliminate the current backlog, it may not be able to meet this deadline. According to ADEQ's workplan, the Department intends to issue permits to 87 new facilities in Federal fiscal year 1994. However, the Department began the year with a backlog of 109 new facilities and expects to receive additional new facility permit applications as the year proceeds.

ADEQ Efforts To Address Problems

While many problems exist within the agency, ADEQ has begun a number of efforts to address them. Some efforts were initiated prior to or in the early stages of our audits, and other efforts have been in response to them.

Department initiatives to address problems - The Department had begun to address problems prior to our audits. However, it is still too early to determine the extent to which these efforts will rectify the problems identified by our audits. According to ADEQ's Director, the Department was suffering from impediments in many areas when he assumed responsibility in 1991. Although the Department continues to lack basic management systems in many of its programs, ADEQ has taken the following steps to improve operations.

- In 1992 ADEQ embarked on an agencywide Total Quality Involvement (TQI) effort that the Department hopes will resolve some of its management problems.

- The Department is attempting to determine whether its resources are utilized in the most effective manner by sponsoring Arizona's Comparative Environmental Risk Project (ACERP), which is designed to identify the most serious environmental needs.

- The Department has also developed a draft strategic plan which has set goals for establishing environmental indicators, improving external customer service, developing employee training programs, and improving organizational integration.

- The Department has also implemented an agencywide enforcement policy that provides policy guidelines and time frames for enforcement activities.

- According to the Director, a number of managers have been given new assignments within the Department to effect improvements within the agency.

In most cases, however, the Department has yet to realize significant benefits from these initiatives. The TQI project is still in its early stages (see Finding V, page 29) and the ACERP project is a year away from completion. Resource shortages impact the Department's ability to meet the goals of its new enforcement policy. Other problems identified in this review hinder management's ability to effectively manage (see Finding I, page 7).

ADEQ has responded positively to audit recommendations - In response to our audits, the Department has instituted several initiatives to address problems we identified in the various regulatory programs and other areas.

- ***Office of Water Quality*** - ADEQ comprehensively reorganized this Office along more functional or programmatic lines as discussed in our previous audit. In addition, the Department is attempting to streamline the Aquifer Protection Permit (APP) process and reduce the number of facilities requiring APP's. Since the prior audit, the Department's productivity has doubled; it issued 28 permits in a 6 month period, as opposed to 28 for the entire previous year. In the drinking water program, formal enforcement actions have increased from 13 in 1992 to 34 in 1993.

- ***Office of Waste Programs*** - The Department reports closing 104 of the 232 backlogged hazardous waste cases we noted in our audit. However, new cases have again brought the backlog up to 196 cases. "Boilerplate" consent and compliance orders have been developed and implemented to reduce case processing time and improve consistency.

- *Cost Recovery* - The Department reports that it has significantly improved cost-recovery efforts. Both our Management Functions (report 93-4) and Office of Waste Programs (93-8) reports criticized the Department for not recouping monies owed to it for clean-up costs and fees. The Department estimates it will increase collections by 36 percent in fiscal year 1994. Based on another audit recommendation, the Department has hired an auditor to pursue other accounts receivable and has, in just under three months, collected $50,000 and billed another $106,000.

- *Legislative Proposals* - In response to our recommendations, the Department is approaching the Legislature this year with several budgetary and statutory issues. For example, the Department is requesting additional staff to bolster the Drinking Water Regulatory Program to address serious problems we found in that area. In addition, the Department is requesting re-establishing general fund support for the Water Quality Assurance Revolving Fund to help ensure sufficient monies for cleaning up polluted sites. The Department is also suggesting several statutory changes based on our audit recommendations. For example, it is proposing uniform processes for obtaining public input to its different programs. It is also seeking authority to establish dedicated funds for critical programs such as drinking water.

ADEQ Still Needs To Address Basic Problems

In addition to continuing to address problems we found in its regulatory programs, the agency needs to address the more generic agencywide concerns we detailed in this audit. The Department lacks sufficient management information systems, training, and policies and procedures to assist relatively inexperienced management and staff in maintaining program continuity, efficiency, and effectiveness. Resultant poor productivity, along with resource shortages in its critical program areas and weak information management, have further impeded the Department's effectiveness.

Audit Scope

Our agencywide audit report on the Department of Environmental Quality presents findings and recommendations in five areas:

- The need to strengthen management oversight and direction.
- The need to address staff shortages in critical program areas.
- The need to develop and maintain important regulatory data and information.
- The need to rectify statutory and administrative procedural problems that impede public input into regulatory processes.
- The need to strengthen management's oversight of the Total Quality Involvement (TQI) Program.

We also developed other pertinent information regarding the events surrounding ADEQ's involvement with the ENSCO permit and hazardous waste disposal facility.

This audit was conducted in accordance with government auditing standards.

The Auditor General and staff express appreciation to the Director and staff of ADEQ for their cooperation and assistance throughout this audit.

We also express appreciation to the Arizona State University School of Public Affairs and Dr. Heather Campbell and her students for their assistance in analyzing ADEQ's permit hearing process.

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FINDING I

TO BE EFFECTIVE, ADEQ MUST FIRST IMPROVE MANAGEMENT THROUGHOUT THE DEPARTMENT

The Arizona Department of Environmental Quality needs to improve the quality of its management and supervision to ensure the efficient and effective operation of its programs. Many ADEQ managers appear to be inexperienced and untrained, and the Department has not put effective management systems in place to help them perform their jobs well. Furthermore, Department management has not provided sufficient guidance to its staff through training programs and written policies and procedures.

Sound management of staffing resources is essential to the efficient and effective operation of programs. Managers and supervisors must provide consistent leadership, direction, and feedback to staff. In addition, management is responsible for organizing, planning, coordinating, measuring, and controlling work activities. Managers, like other professional and technical employees, require sufficient experience and training to be effective.

Several Reasons For Poor Management

Several factors contribute to the Department's management problems. Over the past few years, significant turnover has occurred at all management levels. ADEQ has not developed a systematic program to train new managers. In addition, basic management information systems, which could assist managers in performing their jobs, have not been developed in many instances.

Numerous management changes - Frequent turnover and movement has occurred among ADEQ managers. Primarily as a result of chanages in Governors, the Department has had numerous changes in its top management team. During the seven years (1987-1993) since ADEQ was established, the Department has had for each of the following five top management positions:

- Four directors
- Three deputy directors
- Four assistant directors in the Office of Waste Programs
- Three assistant directors in the Office of Air Quality
- Three assistant directors in the Office of Water Quality

The Department has also experienced frequent turnover among its mid-level managers and supervisors. Changes in management have repeatedly occurred within the

Department. As a result, many section managers and unit supervisors within ADEQ have been in their current assignment for only a short time. For instance,

- At least four different individuals served as manager of the Office of Water Quality's Field Services section between September 1991 and September 1993.
- One ADEQ manager was assigned to manage three different programs in the past two years.
- All five unit supervisors in the Office of Water Quality's Plan Review and Permits section have held their present position one year or less.

As Table 1 shows, many managers and supervisors within ADEQ have held their current assignments for less than two years.

The Department's use of acting managers may further impact continuity. The State of Arizona's personnel rules allow agencies to place employees on special detail for up to four months for noncompetitive assignments, and up to a year for competitive assignments. Currently, 8 of ADEQ's 47 unit supervisors (17 percent) are acting managers on special detail assignments.

Table 1

ADEQ Managers' Length of Service In Their Current Work Assignments

	Less Than One Year	One to Two Years	Total Number of Managers(a)
Section managers	35%	43%	23
Unit supervisors	40%	23%	47

(a) Three section manager and two unit supervisor positions were created within the last two years.

Source: Office of the Auditor General staff review of ADEQ organizational charts for September 1991, 1992, and 1993.

According to ADEQ's Director, approximately two-thirds of the management changes were made by him to help improve operations. He felt that changes, particularly in upper mid-level management, were necessary to effect needed improvements in operations and to implement *"new ways of doing business"* within the Department. However, the extensive amount of management movement over the past two years (whether planned or not) and the continued use of acting managers has some drawbacks. These include upsetting program continuity, inexperienced new managers, hesitancy to take aggressive enforcement actions, and, in general, the delay in restoring smooth operations after changes are made. These factors, combined with 1) managers often lacking basic management skills, and 2) a lack of management information systems to track and manage work, provide some of the explanation for why we found numerous problems in the Department's regulatory programs. To ensure continuity of operations, it is imperative that the Department have management training programs in place and have effective management information systems to assist new managers.

Managers often lack basic management skills - Many managers and supervisors within ADEQ appear to lack basic management training. Managers and supervisors within the Department are often drawn from the ranks of the technical staff. For instance, to meet the minimum qualifications for Environmental Program Supervisor positions, the most common position classification for unit supervisors within ADEQ, individuals must have professional level scientific, hydrologic, or engineering experience in an environmental protection program. No previous management experience or training is required to qualify for these positions. In total, 43 of the 47 currently filled unit supervisor positions (91 percent) require no previous management experience or training. This is typical for such positions, but makes it incumbent on agency management to ensure that proper training is provided for new managers. The Department does not have a formal training program for them. The Department has offered some management-related courses for its employees, but training for managers is not coordinated or mandated. ADEQ top management also acknowledges that the Department has too few personnel who are trained in utilizing management information systems.

Management information systems frequently lacking - Our audit work found numerous problems with management systems in ADEQ programs. In a response to our ADEQ Office of Water Quality audit (report 93-5), ADEQ's Director acknowledged that basic management information systems have yet to be developed within the Department. Management systems can provide supervisors such basic information as workload, productivity, and timeliness of operations; without such information, management's ability to efficiently and effectively utilize resources is significantly hampered.

Management Problems Are Compounded By Staff Turnover and Movement

Not only are ADEQ's managers inexperienced and untrained, the staff they supervise change frequently. Approximately one-third of ADEQ employees change positions each year. Such frequent turnover and staff movement within the Department heighten the need for sound training and policy direction. However, training provided to Department employees is limited and needs to be expanded. The Department also needs adequate policies and procedures to guide staff.

Inexperienced staff magnifies the need for guidance and direction - Because ADEQ staff change positions frequently, proper guidance and direction are critical to maintaining program productivity and effectiveness. As shown in Table 2, employees leaving and employees changing jobs within ADEQ have led to changes in approximately one-third of the agency's active positions in each of the past two years.

Table 2

Arizona Department of Environmental Quality
Total Turnover and Staff Movement
For Filled Covered Positions
Fiscal Years 1991-92 and 1992-93

	1991-92	1992-93
Total Active Positions (a)	528	538
Turnovers	80	58
Intra-agency Transfers	54	58
Special Detail Assignment	43	62
TOTAL	177	178
Percent Movement	34%	33%

(a) Number of permanent covered positions filled all or part of the fiscal year. Does not include exempt positions, temporaries, or permanent covered positions left vacant all of the year.

Source: Office of the Auditor General staff review of Arizona Department of Administration's Action Code Summaries and Employee Turnover Reports for ADEQ in fiscal years 1991-92 and 1992-93 and validated by our review of ADEQ personnel files.

Frequent staffing changes impact program performance. When employees begin a new job or assignment, it typically takes some time for them to perform at the expected level because new skills and procedures must be learned. Our meetings with and interviews of business, government, and other individuals that work with the Department found that staff inexperience was a significant problem. For example, in

a survey of Aquifer Protection Permit (APP) holders and applicants, 39 percent had worked with three or more permit writers on one permit. ADEQ employees also recognize this problem - our survey of ADEQ staff found that 78 percent of all respondents indicated that turnover within the Department has hurt organizational effectiveness.

The high percentage of staff movement can be attributed to several factors. According to our survey, staff cited inadequate salary, lack of promotional opportunities, excessive workload, personality conflicts, stress, and other factors as reasons for turnover. According to ADEQ's personnel unit, turnover and staff transfers with the Department can be attributed primarily to salary increases and promotional opportunities.

ADEQ lacks Departmentwide training program - Training provided to ADEQ employees needs to be expanded and improved. Although the Department reported to us that 425 employees averaged approximately 40 hours of training in fiscal year 1993, we identified a variety of deficiencies with the Department's training efforts. For instance, we found ADEQ has no formal training plan, has not developed a catalog of training available to employees, does little to orient new employees, and does not track employee training. Our recent audits of ADEQ also identified problems with training efforts in several program areas. For example:

- There has been no formal training for hazardous waste compliance officers. New staff have had to learn on the job about the complex regulations, informal ADEQ procedures, and technical issues associated with the cases assigned to them. Recently, however, a new training program for compliance officers was developed.

- No training program has been developed for APP staff concerning how to process or review permit applications.

- Department staff do not receive sufficient training in cost recovery and contract management.

Our survey of ADEQ employees also indicated that staff feel training is deficient. Forty-seven percent of those responding to the survey said they did not receive sufficient training from ADEQ prior to beginning their current assignment. In addition, 39 percent of employees stated that in-service training has been inadequate.

The Department recently began taking some steps to improve employee training. ADEQ management adopted a training policy in May 1993, and a Departmentwide training coordinator was designated in August. Furthermore, at the request of ADEQ, a training needs assessment was performed by Rio Salado Community College (RSCC) earlier this year that identified many areas in which training needs to be developed or improved. Focus groups of ADEQ employees organized by RSCC indicated that training is needed in a variety of subject areas, including: technical writing,

environmental rules and regulations, supervision, project management, sampling methodology, conflict management, problem solving and decision-making, compliance and enforcement policies, and public relations.

While these are positive developmental steps, much remains to be done to implement an effective training program. The Department needs to 1) establish training as a priority; 2) commit resources to training; 3) develop an overall plan for training; 4) ensure that training courses are developed to satisfy Departmental training needs identified in Rio Salado Community College's recent study and in individual employee training plans required by ADEQ's new training policy; and 5) create mechanisms for evaluating the effectiveness of the training program.

Policies and procedures need to be developed and consolidated - ADEQ does not have a set of Departmentwide policies. In addition, policies and procedures are lacking in most ADEQ program areas. During our recent audits of ADEQ, we found that policies and procedures are insufficient in most of the program areas we reviewed. For instance:

- Policies and procedures are needed to guide APP project officers in the review of permit applications, and determination of treatment technology requirements.

- Written guidelines need to be developed for ADEQ's remediation programs. In the absence of written policies and procedures, project managers often refer to Federal remediation guidelines, which tend to be cumbersome and time consuming.

- Policies and procedures need to be developed to guide cost-recovery efforts throughout ADEQ. Specifically, there should be written guidelines that identify cost-recovery roles and responsibilities; define methods for tracking, documenting, and allocating costs; explain how to handle situations, such as dealing with uncooperative responsible parties; and establish time frames for follow up action.

Department employees also indicated a need for written guidance. In our survey of ADEQ staff, 45 percent of those responding said that their section does not have adequate policies and procedures to guide their job performance. A 1992 review of ADEQ performed by the Governor's State Long-term Improved Management (SLIM) team also found that ADEQ has been slow to develop policies, did not have a Departmentwide policy manual, and had not developed written operating procedures in most units.

Although ADEQ management established a policy coordinator position in October of 1991, only limited progress has been made toward developing needed policies and procedures. To date, existing policies have been inventoried and ADEQ's management team has recently approved a system for policy development and management. This system establishes a process for ADEQ employees to follow in developing new policies and procedures, sets time frames for the review of existing policies and procedures,

and calls for them to be placed on an automated system to which all employees have access. Although the Department has established processes and systems to develop policies and procedures, it has yet to perform a comprehensive assessment of what policies and procedures are needed.

RECOMMENDATIONS

1. The Department should improve the quality of management and supervision provided to employees by developing a formal training program for managers.

2. The Department needs to establish a comprehensive and well-coordinated training program for employees. Specifically:

   - ADEQ's top management team needs to demonstrate a commitment to training by making it a priority and committing resources to it.

   - ADEQ needs to develop a Departmentwide training plan.

   - ADEQ should develop training courses to meet the needs identified by Rio Salado Community College's recent study and individual training plans called for in the Department's new training policy.

   - The Department should establish mechanisms for evaluating the effectiveness of training efforts.

3. The Department needs to track and analyze the causes for the high percentage of staff turnover and movement and then work toward developing solutions to stabilize the agency.

4. The Department should make a concerted effort to develop a comprehensive set of policies and procedures to guide employees.

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FINDING II

STAFF PROBLEMS IMPACT ADEQ'S REGULATORY EFFECTIVENESS

In addition to management shortcomings discussed in Finding I, ADEQ also appears to lack staff needed to meet critical regulatory mandates. Our review found staff shortages in several program areas. In other program areas, problems impacting regulatory effectiveness need to be addressed first, before the Department can determine the extent of any staffing gaps. ADEQ should then address any residual staff shortages by 1) analyzing whether staff from less critical programs can be reassigned; 2) further improving cost-recovery and collections efforts to bolster program budgets; and 3) pursuing additional funding through the legislative appropriations process.

Staff Shortages In Several Critical Program Areas

We found several ADEQ programs did not have sufficient staff to properly achieve their statutory mandates. Increasing responsibilities without commensurate funding have strained Department resources.

Regulatory programs overextended - During our review of ADEQ's regulatory activities we found that several critical ADEQ programs have more regulatory responsibilities than staff to address them. For example:

- **Underground Storage Tanks Program (UST)** - Over 4,000 UST facilities should be inspected annually. However, ADEQ has only 4 staff that can perform an estimated total of 816 inspections per year. As a result, UST facilities are inspected for compliance just once every 5 years. There is a significant need for more frequent inspections since 52 percent of the facilities inspected in 1993 were found to be out of compliance and over 3,000 had never been inspected as of mid-1993.

- **Leaking Underground Storage Tank Program (LUST)** - The LUST program has only 16 full-time hydrologists to manage 2,325 contaminated underground storage tank sites. It is estimated that the Department can actively handle only about 508 cases, and in the past 6 years, it has closed 513 cases. At current productivity levels, the Department may not be able to address this backlog. The Department received 177 new cases or sites for the last quarter of calendar year 1993, but only closed out an estimated 130. Department management is developing some initiatives to streamline the process and improve productivity. However, even a 35 percent

increase in productivity would have only kept the number of cases closed even with the number received during the last quarter of 1993.

- **Hazardous Waste Program** - Five FTEs are responsible for issuing hazardous waste permits. Based on current resources, ADEQ will not be able to clear its hazardous waste permit backlog until 1998, six years after the EPA deadline. As a result, hazardous waste facilities continue to operate under less stringent permit guidelines.

- **Drinking Water Program** - The Department has only three staff members devoted primarily to working on the 455 water compliance cases. Enforcement officers stated that 50 cases at any given time would be a maximum case load that could be worked effectively. Furthermore, increasing regulatory responsibilities arising from new EPA-mandated rules will further strain the program. Because of the critical impact on human health and the documented backlog of regulatory activity, the drinking water program requires additional staff. The Department is requesting eight additional employees in its fiscal year 1995 budget to bolster the program.

- **Water Pollution Control Program** - Over 3,000 facilities must be regulated to some extent to prevent water pollution, and it is clear that some regulatory activities are limited or not being performed at all because of too few staff. However, since ADEQ has not yet defined program goals and activities, it is difficult to determine the extent to which staffing is a problem. The Department has recently reorganized this program. Once activity tracking systems and workload priorities are established, the Department should have a better idea of this program's staffing needs.

In addition to backlogs in the Department's regulatory programs, the rules development section is also significantly behind. With the current level of staffing, it will take the Department until 1999 just to complete current rules packages, some of which were legislated in 1986. Further, legislative changes continue to increase the workload. According to the Department, 24 of the 44 rules packages now in process have been mandated since 1991. Any additional rules will have to be postponed past 1999 or bump the current backlog. Although additional staff would help ADEQ catch up, streamlining the State's rules development process could also help ADEQ.

Increasing responsibilities without commensurate funding - In general, it appears that program funding has not kept pace with increasing Department responsibilities. The Department has received additional duties from both the State and Federal levels. For example, the Aquifer Protection Permit Program, the State Superfund, and the On-site Wastewater System Program were all added by State law. At the Federal level, regulatory efforts were expanded for the Safe Drinking Water and Clean Air Programs.

Program funding, however, has not kept pace. Although we did not review every program area's staffing and funding levels, we did find staffing shortages in several program areas. We reported in a recent audit (report 93-5) that the Drinking Water Program was short an estimated $2.6 million to properly carry out regulatory activities. Nationwide, most states and the Federal government have not sufficiently funded environmental programs because of budgetary problems. In fact, in Arizona last year, the Governor's Project SLIM review of ADEQ claimed almost $1,000,000 in position cuts at ADEQ. Nearly 38 funded but unfilled positions were lost. Several of the positions lost came from programs we identified as having staffing shortages, including the Aquifer Protection Permit (APP), Water Pollution Compliance, and Hazardous Waste Compliance Programs.

Actions Needed To Address Staff Shortages

ADEQ should take several steps to address staff shortages. First, except for programs with clearly documented shortages, ADEQ needs to address problems impacting performance found in our audits so that current resources are utilized efficiently and effectively. ADEQ should also, when possible, prioritize regulatory resources so that the most critical programs are funded commensurate with health and environmental impacts. ADEQ also needs to further step up cost recovery and collections efforts to maximize resources already available to the agency. Finally, ADEQ should seek additional funding to close any remaining staffing gaps.

Address problems impacting performance - Except for programs with clearly documented needs, ADEQ needs to address problems negatively impacting the performance of its 580 current employees before seeking more staff. While some areas appear clearly understaffed, the Department cannot determine the extent of additional staff needs until it rectifies problems found by our recent audits and this audit. For example, focus group participants from both industry and environmental groups told us the key to addressing staffing problems in the APP program was to obtain better qualified staff. They believe fewer, more qualified staff could process permits in a more timely manner than at present. Similarly, we cannot estimate the productivity losses occurring in other programs due to the significant turnover of management and staff as described previously in this report.

In addition, the Department is undergoing an extensive self-improvement effort that management hopes will improve its business processes. Although we found workload backlogs in several program areas, the additional staff needed may be less after ADEQ benchmarks performance in each program area to determine reasonable productivity levels and determines the overall regulatory workload for each program. Using performance levels and total workload figures, ADEQ can determine if each program area has sufficient staffing resources to carry out its regulatory mandates.

ADEQ has instituted several changes and initiatives to improve performance in several program areas. For example, it retained consultants to analyze workloads and fees in the APP, Solid Waste, Special Waste, and Plan Review programs. Recently developed boilerplate enforcement documents will streamline some aspects of the enforcement process. Some documented productivity improvements have occurred in the APP and Drinking Water Programs. Again, however, additional staff requirements cannot be accurately determined until workloads are identified and processes are streamlined in each program area.

Prioritize activities - In addition to improving the productivity of current employees, ADEQ may also address staff shortages by prioritizing activities to ensure that the more important ones are performed well. The Department has initiated efforts to determine which program areas are most critical and is currently in the middle of its Arizona Comparative Environmental Risk Project (ACERP), which is a two-year study to assess and prioritize the environmental risks faced by Arizonans. The Department hopes to use this information to direct its resources toward its most significant environmental programs. Since many of the Department's programs are both Federally and State mandated, there is concern about compliance with legal mandates. The Federal government currently provides separate grants for several program areas. The EPA, however, is considering a proposal to allow states greater flexibility in using Federal funds through combined or block grants.

Improve cost-recovery and collection efforts - ADEQ's available resources could, in part, be augmented through improved financial operations. In a recent audit (report 93-4), we reported that the Department's poor cost-recovery and fee collections efforts have cost them potentially millions of dollars. In some cases, these monies go directly back to ADEQ programs to supplement their operating budgets. For example, businesses and other parties that have caused pollution are required to repay the cost of site investigation and cleanup to offset government costs. If these costs are not fully identified and collected, existing government resources are strained even further.

Our previous audit work found that millions of dollars had not been recovered. Since that report was released, the Department has increased its efforts. ADEQ now reports a 36 percent increase in collections from fiscal year 1992 to 1993, with collections to date for fiscal year 1994 exceeding fiscal year 1993's amounts. Continued efforts should yield even greater amounts in the future.

Seek additional resources - After ADEQ has reprioritized resources and improved cost recovery and collections efforts, it can then seek additional general fund and other resources to close any remaining resource gaps. The Department has developed a proposal that would augment its current budget by using additional general fund and program-specific special funds to keep some revenues in program areas, rather than transferring them to the general fund. Currently, program-generated revenues such as inspection fees, certification fees, application fees, and penalties return to the general fund in some cases. Examples of some program areas where special funds are proposed include drinking water, water quality, and a consolidation of certain existing

special funds into a new solid waste fund. We did not evaluate or comment on the efficacy of the proposal due to time constraints.

RECOMMENDATIONS

1. ADEQ needs to determine staffing needs in all program areas. To do this, ADEQ should:

   a. Address various management and other problems impacting ADEQ's regulatory effectiveness.

   b. Determine reasonable productivity standards for each program.

   c. Determine workloads for each program.

   d. Calculate staffing needs based on current resources, productivity standards, and regulatory workload for each program.

2. ADEQ needs to determine if staffing resources can be better utilized to address the agency's most important regulatory duties.

   a. Utilize ACERP results to identify the Department's most important regulatory programs.

   b. Utilize results of staffing needs analyses in recommendation No. 1 to identify any additional staff that could be transferred from lower priority programs.

3. ADEQ needs to seek additional resources for those program areas that cannot be sufficiently addressed through reprioritization of current resources by:

   a. Further improving cost-recovery and collections efforts.

   b. Seeking additional general fund resources.

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FINDING III

ADEQ NEEDS TO IMPROVE INFORMATION MANAGEMENT

Poor information management hampers ADEQ's regulatory efforts. Accurate and accessible information is vital to meeting statutory mandates and achieving agency goals. Our audits found that ADEQ has not managed information effectively. In addition, the Department should take steps to improve security of agency documents.

Accurate and well-managed information is an important component of effective environmental regulation. Data submitted by various regulated facilities allow ADEQ to determine, for example, if drinking water is safe, or if discharges into rivers exceed pollution limits. ADEQ inspection data allows the Department to determine whether regulated facilities are operating within guidelines. Information relating to enforcement cases helps ADEQ to take action against facilities that will not comply with health and environmental standards. Summary and analytical information assists ADEQ managers in overseeing agency operations.

Problems With Information Management

We found information problems in each of the four offices within the Department. Problems include lack of data; inaccurate, conflicting, and duplicative data; and lack of information to track and oversee the various regulatory programs.

Our audit of the Office of Water Quality (report 93-5) found that:

- The drinking water data base did not allow the Department to monitor and enforce several important health and regulatory requirements.
- The water pollution compliance data base lacked important information on the number and types of facilities in the state, system operating parameters, and field inspections.
- The Aquifer Protection Permit Program lacked an effective management tracking system to monitor staff workload and output.

Our Management Functions audit (report 93-4) showed that:

- ADEQ was not tracking all remediation costs that the State could recover from parties responsible for polluted sites. As a result, some of the millions of dollars spent by the State on remediating polluted sites was not recovered.

- The Office of Air Quality (OAQ) failed to adequately track program costs during fiscal year 1992-93, preventing the State from recovering nearly $585,000.

- The Office of Administration lacked readily available information on ADEQ expenditures for contracted services and the number of contracts in effect.

- Three units within the Office of Waste Programs maintained separate data bases on personal computers due to their failure to coordinate data acquisition and information sharing.

- ADEQ does not maintain records of the total costs for plan reviews, inspections, and wastewater reuse permits. As a result, the Department cannot recover as much as $360,000 annually for these services.

We reported that the Office of Waste Programs' landfill tracking system was incomplete and therefore not usable (report 93-8).

During this audit we found additional problems similar to those we encountered in the previous audits, including:

- The Underground Storage Tank (UST) program data base does not have updated information on enforcement actions initiated, or the status of facility cleanup efforts.

- The OAQ's previous data systems were fraught with many problems. OAQ is currently implementing a new data base which the Department believes will be able to provide improved features and better management information. Some historical information may not be captured, however, because of problems with previous systems. Further, we found continuing problems with both accuracy and completeness during recent access to the new system.

ADEQ's information management problems result from a variety of causes. As noted in our recent audit of the Department's Management Functions (report 93-4), ADEQ has not provided strong, consistent direction for its agencywide EDP applications. At the program level, we found that systems are limited by too few staff to update and maintain data; failure to include all relevant program information; lack of emphasis

for complete, usable data; and cumbersome, difficult-to-use systems that discourage agency employees from updating important information.

Addressing the Department's information problems will require action at the program and Department management levels. Two root causes for information problems at the program level appear to be 1) insufficient staff available for data management, and 2) questionable planning, systems development, and systems maintenance by program staff. ADEQ program managers need to review their information needs and the ability of their data bases to meet them, and then determine what barriers exist. At the Department level, top management needs to emphasize and ensure that information problems are addressed by program managers.

ADEQ has begun to determine some of their agencywide data management problems. Information technology teams are benchmarking current practices and determining both internal and external customer information needs. All of this information will be assimilated into a package with recommendations to a committee comprised of the director, deputy director, assistant directors, and an expert from the business community. Their task is then to set goals and objectives, and priorities, and give direction for Department action over the next several years.

ADEQ Needs To Improve Document Security

ADEQ should improve security over documents available for public review. Currently, weak document control enables people to remove documents that may be essential to the Department's regulatory effectiveness.

ADEQ maintains a large volume of documents for most aspects of its regulatory operations. Particularly in the areas of compliance and enforcement, ADEQ files provide the legal evidence needed to determine compliance with State law and develop enforcement cases. Most of ADEQ's information files are defined as part of the public record and can therefore be viewed or copied by the public.

Weak controls over files - Department control over its files is weak in several ways. First, the public is allowed to access the agency's original documentation. If this information is damaged or lost, it is irretrievable. In fact, in one instance we had to provide ADEQ officials with copies of pertinent documentation that we had obtained from their files at an earlier date because they could not locate the original file documentation. Second, Department staff typically do not monitor individuals reviewing files, even though ADEQ has reported instances of missing files or instances of individuals attempting to remove documents. Third, confidential information is sometimes mixed in with public documents in files. Fourth, the files are disorganized, making it difficult for staff to determine if they are complete.

ADEQ needs to strengthen document control - ADEQ needs to address its weak file security control. One very simple solution would be to place a cover sheet at the front of each file listing its contents. ADEQ has recently developed a policy for better organizing its various enforcement files; other files, however, still need to be addressed. For guidance in organizing other files, ADEQ can also seek assistance from the State's Department of Library, Archives and Public Records (DLAPR). DLAPR's staff are trained to assist agencies in designing comprehensive file organization and storage systems.

RECOMMENDATIONS

1. ADEQ program managers should assess their information systems' ability to provide data needed to effectively perform program activities. Where this review identifies shortcomings, further analysis should focus on potential causes, including lack of staff, poor system design, and difficulties in using the system. ADEQ top management needs to ensure that problems are addressed.

2. ADEQ needs to improve document security. Specifically, the agency needs to ensure that:

   a. Information cannot be surreptitiously removed by people who are reviewing files;

   b. Confidential information is not mistakenly included in the public information portions of the files;

   c. Information in the files is organized, complete, and not duplicative. An "Index to File Contents" sheet at the front of the file would assist both ADEQ and the public.

3. ADEQ should seek assistance from the Department of Library, Archives and Public Records for designing a comprehensive file organization and storage system.

FINDING IV

STATUTORY AND ADMINISTRATIVE BARRIERS IMPEDE PUBLIC INPUT IN ADEQ'S PERMITTING AND RULES DEVELOPMENT PROCESSES

Statutory and administrative changes are needed to facilitate public input. Representatives from business, public interest groups, and concerned citizens told us they felt their input was seldom utilized by the Department. Statutes, rules, and procedures governing the Department's decision-making processes limit the public's ability to provide input.

Citizens Dissatisfied With ADEQ's Public Input Process

Although public participation in ADEQ decisions is sometimes required by law or rule, members of the public are at times dissatisfied with their inability to provide input to Department decisions. The public input process is an important component of regulatory decision-making because it affords citizens, businesses, and government entities that might be affected by a permit decision or new agency rules an opportunity to express their opinions or concerns to the Department.

Our review found dissatisfaction with the public input process at ADEQ. Forty-one participants were surveyed, including business representatives, public interest group representatives, and concerned citizens.[1] Nearly two-thirds of those responding were dissatisfied with how ADEQ responded to their comments, and more than three-fourths perceived that their comments were not taken into consideration by ADEQ. Many felt the decisions were already made prior to the hearing. Respondents also identified other problems with the process including inadequate public notice of meetings, inappropriate ADEQ staff behavior at meetings, and difficulty obtaining related information.

Not surprisingly, some environmental groups and citizen activists stated that the Department typically favors the regulated community over the interests of the environment or the general public. Our survey of Department staff found that many ADEQ employees also perceive that business and industry are the agency's primary

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(1). We surveyed participants in the rules development process. Arizona State University School of Public Affairs graduate students performed surveys and other analyses for us on the permit hearing process and presented conclusions in their report, *"Public Participation in the ADEQ Permit Hearing Process,"* May 1993.

customers, although they feel the general public should be. However, our surveys, interviews, and focus group meetings with business and industry representatives found that they were also unhappy with the Department.

Although many of those we surveyed were dissatisfied with the Department's public input processes, some of their concerns may be attributed to an uncertainty about ADEQ's regulatory role. Some survey respondents were unclear about why public hearings are held. For example, ADEQ's Director told us that some members of the public may perceive ADEQ's role as determining whether a facility should be allowed to operate in a certain area. In reality, ADEQ's role is to determine whether the facility can operate a business that emits a controlled amount of pollution in accordance with law and regulations. According to ADEQ's Director, facility location decisions are the responsibility of the local government zoning authority.

Statutory And Administrative Barriers Contribute To Public Input Problems

Some statutory and ADEQ administrative procedures create problems for persons providing input to agency decisions. Requirements for public hearings on permits vary from program to program. In addition, statutes established for rule development for all State agencies allow for formal public input only late in the process when major changes require the process to begin anew.

Permit hearing requirements vary - The Department is not required to hold hearings for most permits. Permit hearings are specifically mandated only in ADEQ's Hazardous Waste Disposal and Solid Waste Programs. A.R.S. §49-943(2) requires "any agency" granting a final permit for a hazardous waste facility to hold a public hearing 30 days before a final decision is made. Hearings are not specifically required in air quality, water quality, or other waste programs. However, hearings may be held if requested by a member of the public or at the Director's discretion.

Even when hearings are held, procedures and time frames vary among programs. This makes it difficult for the public to determine when and how it should respond. Although ADEQ has a rule (R18-1-402) which establishes some general requirements for conducting hearings, other requirements vary among the individual programs. For example, within the Office of Waste Programs' Solid and Hazardous Waste Program, permit hearings must be held 30 days before a decision is made to grant the permit. However, all other Office of Waste Programs' permit hearings, if held, must be held within 45 days after a hearing is requested.

Variation also exists in ADEQ's procedures concerning public notice to property owners within the outer boundaries of the proposed waste site. Solid and hazardous waste statutes require public notice to adjacent property owners. In contrast, air quality and water quality permit processes have no such requirement. According to

the ADEQ Director, the Department has proposed legislation that will make public notice requirements uniform for all programs.

Meaningful public input for rules development also limited - Statutory and administrative barriers also impede the public's ability to comment on proposed rules and regulations. State law governing the rules development process provides for formal public input very late in the process. A public hearing is not held until after an agency develops the rule and it is approved by the Governor's Regulatory Review Council (GRRC). The public hearing is the last step in the process prior to the final Attorney General review and certification. However, public input may have little impact after GRRC's approval because of the legal requirement that any significant change to the rule mandates that the rules development process begin again. According to ADEQ, since the total rule adoption process takes approximately 18 months, an agency may be hesitant to make changes requested by the public, particularly if it had to start the process over.[1]

To compensate for restrictions in the State's rules development process, ADEQ has established an informal consultation process in the early stages of rule development in order to avoid substantial changes later in the formal process. Although this approach is a valuable effort, it is indeed informal and discretionary without any guidelines. For new rules, the Department has been fairly consistent in utilizing the informal process. However, the Department does not generally use the informal process when rules are revised. In addition, they do not have procedures to ensure that the informal consultation process is conducted consistently, and that all interested parties are given the opportunity to comment.

The Department does, in some cases, conduct extensive efforts to ensure adequate public input, as in its recent development of air quality rules. However, the Department's recent efforts to develop rules for water plant operators illustrate some of the problems resulting from lack of guidelines in the informal public input process. The Department established an advisory committee of plant operators to provide technical advice and assistance. However, at one committee meeting attended by audit staff, one of the certified operators informed the committee that ADEQ had not provided committee members with the most current draft of the proposed rules. ADEQ staff had revised the original draft twice without the committee's knowledge or input. As a result, the committee could not adequately comment on the most current version of the proposed rules.

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(1). In response to these concerns, ADEQ has been actively participating in a legislative study of problems with the rules development process. The Legislature's Joint Study Committee on Regulatory Reform and Enforcement has identified problems with the rules development process and has drafted a number of recommendations to streamline it.

RECOMMENDATIONS

1. ADEQ should eliminate barriers to public input for environmental permit decisions by:

   a. Instituting Departmentwide guidelines on when to hold public hearings for permits, including information hearings early in the process; and

   b. Revising the various programs' permit hearing procedures to conform to the Departmentwide procedures.

2. ADEQ should establish procedures to ensure that all interested parties have an opportunity to participate in the informal public input process for rule development.

3. ADEQ should also continue working with the Legislature to revise the State's rules development statutes to include provisions for public input earlier in the process.

FINDING V

ADEQ NEEDS TO FURTHER STRENGTHEN THE MANAGEMENT OF ITS TQI PROCESS

ADEQ management needs to provide stronger oversight for its Total Quality Involvement (TQI) Program to ensure that expected benefits are realized by the Department. ADEQ management selected the TQI Program as its primary method to address problems identified by the Governor's Project SLIM. To date, few ADEQ programs have completed the TQI process. Although it is too early in the process to determine whether TQI will be successful, ADEQ top management needs to more closely monitor and direct the process to ensure that the Department receives full benefit from this investment.

TQI Selected To Address ADEQ Organizational Problems

TQI was initiated by ADEQ management as its primary instrument for improving Department programs and addressing concerns raised by the Project SLIM review.[1] The first component of ADEQ's TQI Program is its Business Process Improvement (BPI) effort, which focuses on documenting existing work processes, identifying operational problems, and developing recommendations. Program Advisory Teams (PAT's), consisting of ADEQ staff and outsiders that deal with the agency, are responsible for the BPI effort.

ADEQ has made a considerable investment in its program. Approximately $23,000 has been invested in outside TQI training for ADEQ staff. Additionally, ADEQ reports that approximately 32,000 employee hours have been devoted to TQI activities in fiscal year 1992-1993. Many more hours are expected to be invested during 1993-1994 as more teams progress with the BPI process.

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(1). In fiscal year 1991-1992 the Governor's Project SLIM identified a variety of issues needing to be addressed within ADEQ. Recommendations for improvement to ADEQ were in the areas of organizational and process restructuring, income enhancement, management controls, public benefits, and staffing requirements.

BPI Process Still In Early Stages

To date, the TQI BPI process is still in its early stages. Since its July 1992 inception, only 8 of the 33 PAT teams have developed recommendations. The remaining teams are not expected to complete their reports until as late as December 1994. The 8 completed team reports contained 261 recommendations for improving operations within the Office of Waste Programs, Office of Air Quality, and Office of Administration. According to the Department, 32 percent of these recommendations have been implemented and 21 percent are in the process of implementation. The remaining 47 percent are not completed because 1) they require legislative action; 2) resources are not available to implement (the recommendation was referred to another office for implementation); or 3) recommendations were rejected by the Quality Council. Recommendations range from narrowly focused procedural improvements (*"eliminate the practice of putting employee paychecks in envelopes"*) to broad structural changes within some programs (*Solid and Special Waste Program: "Organize the section functionally"*).

TQI Needs Better Top Management Oversight

Although it is too early to evaluate the impact of TQI, our audit work indicates that for the Program to be most effective, greater management oversight is needed. Two problems were particularly evident. First, although improvements have been made, the Department has not fully documented TQI's progress and impact. Second, many ADEQ staff do not see TQI as addressing key issues within their programs. These concerns are particularly critical given ADEQ management's reliance on TQI as its primary method for addressing Department performance problems.

TQI impact unknown - Although the Department has invested considerable resources in TQI, it has done little to monitor the implementation and effect of recommendations. Although the Department has recently developed a system to monitor the status of recommendation development and implementation, very few recommendations progressed between July and December 1993. In addition, when programs do report progress on recommendations, the Department has yet to verify or track any cost savings or other benefits. As a result, top management does not know whether the TQI process is indeed effective. Another problem is that some PAT teams were formed and operating without the knowledge of the TQI coordinators within the Director's Office. Further, the Department has only recently drafted an action plan for what to do after the PAT teams complete their reports. Without better top management oversight, the Department cannot be sure that the TQI process is meeting expectations, or that the Department is receiving an appropriate return on its investment.

The Department acknowledged to us that top management review for TQI was lacking. In July 1993, they initiated several actions to solve this situation. They hired a TQI specialist to oversee the program, instituted a Quality Council comprised of the Director, Deputy Director, and a representative from the Governor's Office of Excellence to view and judge BPI team progress, and developed various tracking methodologies to monitor the BPI progress. Since then, the TQI process has been redefined and teams are now more accountable. Most tracking and guidance documents are still fairly new, however, and management needs to ensure that they are fully implemented and utilized.

Critical issues may not be identified - Many ADEQ employees are not convinced of TQI's value and feel that it may not have an effect on improving agency operations. In our survey of ADEQ employees, 54 percent of those expressing an opinion (186 of 341 employees) did not believe that TQI will resolve key problems within their programs. Additionally, 45 percent of those expressing an opinion (139 of 307) do not believe that recommendations were being implemented in a timely fashion, and 48 percent of ADEQ staff (170 of 354 employees that expressed an opinion) did not see TQI as having a positive impact on organizational effectiveness and efficiency.

Our survey was administered soon after ADEQ management began addressing problems with the TQI program. Therefore, employee perceptions could be based on experiences prior to renewed efforts by top management. Top management, however, should review and analyze whether critical issues are indeed being addressed and recommendations being implemented, particularly in the eight program areas completed before changes were made in the TQI program.

RECOMMENDATIONS

Top management should strengthen the TQI process by:

1. Implementing recently developed reporting methodology to document all TQI activities.

2. Verifying whether recommendations are being implemented.

3. Analyzing whether key issues are being identified and addressed.

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OTHER PERTINENT INFORMATION

As part of our audit work we developed information on events relating to the development of the Arizona hazardous waste management facility (HWMF) by ADEQ and ENSCO, Inc.

In August 1992 it was disclosed that ADEQ had accepted a $16,000 payment in 1987 from ENSCO, the contractor for the facility. The payment was intended to assist the Department in meeting the administrative costs needed to manage the project. This disclosure raised concerns about ADEQ's relationships with regulated entities and contributed to the Joint Legislative Oversight Committee's request that the Auditor General conduct a performance audit of the Department ahead of its scheduled sunset audit. Because of these concerns, we reviewed some of the key aspects of the HWMF development.

Although ADEQ subsequently determined that advance funding by the contractor was not in accord with the contract and returned the money to ENSCO in February 1991, acceptance of the advance funding characterized the sometimes unusual efforts made by ADEQ and its predecessor agency, the Arizona Department of Health Services, to facilitate the project.

HWMF selection and development - Development of the HWMF on a site near Mobile, Arizona, was Arizona's strategy for managing hazardous wastes to comply with Federal law. The 1981 Legislature selected the Mobile site and directed that the facility be constructed and operated by a private contractor. The Arizona Department of Health Services (ADHS) was the lead State agency for the project at the time and, upon recommendation of a technical advisory committee, selected ENSCO as the contractor in 1983 based on its proposal to construct and operate a high-technology facility. After several years of environmental impact statement development and negotiations about site access improvements, the State signed a contract with ENSCO in 1986 to build and operate the facility.

ADEQ became an independent State agency on July 1, 1987, and assumed responsibility for the HWMF. The Department granted ENSCO permits needed to begin facility construction in 1988 and continued work on permits needed for operation. Between 1986 and 1987, ENSCO's plan for the facility grew from one to three incinerators and expanded landfill capacity. The changes were justified as necessary to ensure that the facility would be economically feasible.

The Mobile hearing and its aftermath - Draft permits for HWMF operation were issued in 1990 with the public comment period occurring between April 5 and May 21, 1990, and a public hearing held on May 7, 1990. Concern about the size of the HWMF facility, proposed incineration, and the need to import out-of-state wastes led to public opposition. The public hearing was disrupted when many attendees could not enter the hearing room. Sheriff's officers forcibly removed 18 individuals after

hearing officials had requested that people leave the overcrowded hearing room and move to an outdoor area where they could follow proceedings via loudspeaker.

The disturbance at the hearing and the use of force to remove protesters created additional opposition to the HWMF. Two lawsuits were filed by individuals injured at the hearing. However, complaints against the State were dismissed by the trial judge. In 1991, the State canceled the contract with ENSCO and subsequently paid the company over $44 million for work conducted to date. The Mobile site remains inactive. The Department of Administration provides security and maintenance for the site at an estimated cost of $116,000 per year.

ENSCO and ADEQ's image - The events involving the development of the HWMF raised questions about the State's objectivity in dealing with regulated industries. Because HWMF development was a priority throughout the 1980's, ADHS and ADEQ staff occasionally went to unusual lengths to facilitate the project's development. For example, one ADHS staff member traveled to Dallas, Texas, in 1983 to ensure that ENSCO's facility proposal would be received by the State on time. Although staff actions were intended to ensure that the State would have at least two choices of contractors for the HWMF, the actions also appear to be a special effort to assist potential contractors. ADEQ's willingness to accept funding from ENSCO to support administrative staff needed for the HWMF created a similar impression.

APPENDIX

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APPENDIX I

AUDITOR GENERAL SURVEY OF ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY STAFF

As part of our agencywide audit of ADEQ, we conducted an organizational climate survey of Department staff. The survey covered a wide range of topics, including management, training, organizational effectiveness, and job satisfaction.

Written questionnaires were distributed to a total of 583 ADEQ employees in August 1993. Completed questionnaires were received from 445 individuals, for a response rate of 76 percent.

Data from the questionnaires were entered into a data base file by the Auditor General's staff. After reviewing the data to ensure that it was entered accurately, various statistical analyses were performed. This attachment presents an overview of responses received from ADEQ employees. For most items, the percentage of employees selecting each response category is provided. However, for items 48 through 50, which required ranking of multiple response categories, the raw number of responses is presented.

OVERVIEW OF ADEQ EMPLOYEE SURVEY RESULTS

Note: Except where indicated, the frequency distribution of survey items is presented below. Percentages may not add to 100 percent due to rounding.

1 = agree strongly
2 = agree somewhat
3 = neutral
4 = disagree somewhat
5 = disagree strongly
DK = don't know
NR = no response

	1	2	3	4	5	DK	NR
1. I have confidence in the following managers' technical knowledge and abilities to perform their jobs:							
a. the director	38%	26%	13%	6%	2%	13%	2%
b. the deputy director	41	20	13	5	1	17	2
c. my assistant director(s)	24	22	19	12	9	11	4
d. my section manager(s)	37	23	13	9	8	6	5
e. my unit manager(s)	41	19	9	7	8	4	12
2. I have confidence in the following managers' management skills and abilities to perform their jobs:							
a. the director	44	25	11	5	3	11	2
b. the deputy director	34	26	14	5	3	18	2
c. my assistant director(s)	20	25	15	13	14	10	3
d. my section manager(s)	23	26	16	10	11	5	4
e. my unit manager(s)	27	22	12	11	12	5	12
3. Management has initiated efforts that will resolve the most important problems in my program area	6	22	20	25	22	4	1
4. There is sufficient coordination and communication between my section and other sections within ADEQ	2	15	20	33	27	2	1
5. I am familiar with the organizational structure at ADEQ and the tasks performed by the various Offices within the Department	14	43	16	19	6	2	0
6. ADEQ's tasks are logically organized among the various sections	4	25	26	24	12	8	0

1 = agree strongly
2 = agree somewhat
3 = neutral
4 = disagree somewhat
5 = disagree strongly
DK = don't know
NR = No Response

	1	2	3	4	5	DK	NR
7. There is no overlap or duplication of functions between my section and other sections in ADEQ.	11%	18%	13%	34%	15%	9%	0%
8. Staff roles and responsibilities within my section are clearly defined	17	28	12	25	16	2	0
9. I received sufficient training from ADEQ prior to beginning my current assignment.	7	22	21	24	24	1	1
10. I receive adequate in-service training for my current assignment	12	27	21	23	16	0	0
11. My section has adequate policies and procedures to guide me in doing my job	9	25	19	25	20	1	1
12. My supervisor lets me know exactly what is expected of me .	25	31	15	16	13	1	0
13. I have enough authority and support from superiors to make the necessary decisions and perform my job	22	32	15	16	14	0	1
14. The following ADEQ managers are committed to staff training:							
a. the director	24	20	18	6	4	27	2
b. the deputy director.	23	17	17	5	4	32	2
c. my assistant director(s) . .	18	16	18	9	11	23	4
d. my section manager(s). . . .	26	24	15	9	11	11	4
e. my unit manager(s)	34	21	12	7	8	8	12
15. ADEQ provides quality services to its customers	14	41	22	13	4	5	1
16. My section gets its job done effectively and efficiently. . .	17	39	15	18	9	2	1
17. Overall, ADEQ contributes significantly to improved environmental quality.	27	34	20	8	5	5	0

1 = agree strongly
2 = agree somewhat
3 = neutral
4 = disagree somewhat
5 = disagree strongly
DK = don't know
NR = no response

	1	2	3	4	5	DK	NR
18. Program bureaucracy ("red tape") impedes ADEQ's efficiency and effectiveness . .	45%	31%	12%	5%	4%	3%	1%
19. Turnover within ADEQ impedes organizational effectiveness . .	57	21	10	5	3	3	0
20. Use of "acting" managers to fill vacancies within ADEQ impedes organizational effectiveness.	26	23	19	15	9	9	0
21. Unfilled and frozen positions impede ADEQ's ability to fulfill its mandate.	52	25	12	3	4	5	1
22. ADEQ has sufficiently qualified staff to fulfill its mission . .	9	29	20	22	15	5	0
23. ADEQ has a sufficient number of staff to fulfill its mission . .	5	15	15	27	32	5	0
24. ADEQ actions ensure compliance with environmental laws and regulations.	8	25	28	21	12	6	0
25. The public has adequate access to ADEQ's data and files	22	31	20	10	5	12	0
26. The public has sufficient opportunities to provide input in the permitting and rule-making processes.	18	26	21	7	4	22	0
27. ADEQ encourages public input in the permitting and rule-making processes.	20	30	20	6	3	19	1
28. The following ADEQ managers are committed to implementation of TQI techniques:							
a. the director	53	15	9	2	3	17	2
b. the deputy director.	46	16	9	2	3	22	2
c. my assistant director(s) . .	33	17	13	4	8	21	4
d. my section manager(s). . . .	32	22	14	4	8	16	5
e. my unit manager(s)	26	20	15	6	8	14	11
29. Key problems in my program area have been identified in the TQI process.	12	21	17	13	15	21	1

1= agree strongly
2 = agree somewhat
3 = neutral
4 = disagree somewhat
5 = disagree strongly
DK = don't know
NR = no response

	1	2	3	4	5	DK	NR
30. Recommendations made by TQI teams are being implemented in a timely fashion.	5%	12%	21%	18%	13%	30%	1%
31. TQI will resolve the most important problems in my program area	5	10	20	16	25	22	1
32. To date, TQI has had a positive impact on organizational effectiveness and efficiency . .	6	16	19	18	20	19	1
33. In general, I am satisfied with my job at ADEQ	20	35	18	16	10	0	1
34. My salary is adequate compensation for the position I hold	4	10	6	24	56	0	0
35. My workload is excessive	27	27	26	14	6	0	0
36. The value of my work is recognized and appreciated by my supervisor	28	29	15	12	15	1	0
37. There are opportunities for advancement at ADEQ.	8	19	16	19	36	3	0
38. I feel stress in my job.	30	32	20	11	7	0	0

39. How would you describe the management style within ADEQ?

8% Very Participative
18% Somewhat Participative
23% Neutral
22% Somewhat Autocratic
22% Very Autocratic
5% Don't Know
3% No Response

40. How would you describe the supervisory style within ADEQ?

6% Very Mentoring
19% Somewhat Mentoring
30% Neutral
16% Somewhat Punitive
17% Very Punitive
8% Don't Know
3% No Response

41. How important to you are the managerial and technical abilities of managers within ADEQ?

12% Technical Abilities Most Important
14% Technical Abilities Somewhat More Important
34% Technical/Managerial Abilities Equally Important
18% Managerial Abilities Somewhat More Important
16% Managerial Abilities Most Important
2% Don't Know
5% No Response

42. How would you rate top management's (director, deputy director, and assistant directors) level of accountability for Department actions/decisions?

25% Highly Accountable
26% Somewhat Accountable
19% Neutral
10% Somewhat Unaccountable
6% Not Accountable At All
12% Don't Know
2% No Response

43. How would you rate mid-management's (section and unit managers) level of accountability for Department actions/decisions?

14% Highly Accountable
27% Somewhat Accountable
21% Neutral
15% Somewhat Unaccountable
14% Not Accountable At All
7% Don't Know
2% No Response

44. How would you rate the organizational climate within ADEQ?

2% High Morale
13% Somewhat High Morale
20% Neutral
26% Somewhat Low Morale
34% Low Morale
3% Don't Know
3% No Response

45. Whose interests does ADEQ primarily serve?

7% Strongly Favors Environment
10% Somewhat Favors Environment
42% Balances Environment and Regulated Community
20% Somewhat Favors Regulated Community
9% Strongly Favors Regulated Community
9% Don't Know
3% No Response

46. Based on your experience in recent years, overall management of the Department has:

19% Greatly Improved
31% Somewhat Improved
14% Stayed About The Same
12% Somewhat Worsened
8% Greatly Worsened
15% Don't Know
2% No Response

47. Based on your experience in recent years, the ADEQ's organizational climate has:

10% Greatly Improved
24% Somewhat Improved
25% Stayed About The Same
16% Somewhat Worsened
7% Greatly Worsened
16% Don't Know
1% No Response

Note: For items 48 through 50 below, raw numbers are used rather than percentages to improve clarity in presenting rank order responses.

48. In your opinion, What is the major cause of turnover within your unit or division? (See note above)

	1	2	3	4+	Not Ranked
Inadequate Salary	294	69	18	22	42
Lack of Promotional Opportunities	65	155	66	72	87
Excessive Workload	30	70	99	106	140
Personality Conflicts	32	29	67	153	164
Stress	23	27	74	164	157
Other	32	20	16	27	350
Don't Know	11	0	1	2	431

49. In practice, ADEQ's primary customers are: (See note above)

	1	2	3	4+	Not Ranked
Public	151	123	93	12	66
Environment	40	108	172	31	94
Regulated Community	192	119	61	2	71
Other	54	19	10	17	345
Don't Know	0	0	0	0	0

50. In your opinion, ADEQ's primary customers should be: (See note above)

	1	2	3	4+	Not Ranked
Public	251	121	26	2	45
Environment	106	116	144	12	67
Regulated Community	59	142	161	11	72
Other	34	11	9	20	371
Don't Know	0	0	0	0	0

51. I have been employed at ADEQ for:

8% Less Than 6 Months
24% 6 Months but Less Than 2 Years
39% 2 to 5 Years
28% More Than 5 Years
1% No Response

52. I would classify my current position as:

<1% Top Management (Director, Deputy Director, or Assistant Directors)
15% Mid Management (Section or Unit Managers)
53% Technical Staff (EHSs, EPSs, Hydrologists, Engineers, Planners, etc.)
14% Support Staff (EDP staff, Accountants, Personnel Analysts, Contract Specialists, etc.
13% Clerical Staff
3% Other
2% No Response

53. I work in the Office of:

12% Administration
17% Air Quality
30% Waste Programs
34% Water Quality
5% Director
3% No Response

Agency Response

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Fife Symington, Governor Edward Z. Fox, Director

February 2, 1994

Mr. Douglas R. Norton
Auditor General
State of Arizona
2910 North 44th Street
Suite 410
Phoenix, Arizona 85018

Dear Mr. Norton:

Thank you for the opportunity to respond to the Agency-wide Issues audit (the Report) on the Arizona Department of Environmental Quality (ADEQ). Before addressing the specifics of this audit I would like to express my appreciation for your acknowledgment of the positive changes which have occurred under this administration.

While I acknowledge most of the analysis in the Report, it still fails to make clear that many of the issues you raise are historic and exist as a result of years of neglected management and rapid legislative changes. To this point, I believe that years of management neglect cannot be fixed in the short term. It will take several years, additional resources and in some cases legislative changes to make all the needed changes for ADEQ to be a quality organization capable of fulfilling its mission.

I took this job in July 1991 for the express purpose of changing the Department. As an attorney, I had worked with this Department since its inception in 1987 and, like other stakeholders, had a strong belief that the Department was dysfunctional. Indeed, based upon my experience with both the environmental community and the business community, I would say that everyone involved in working with the Department had a common opinion. When asked to take the directorship by Governor Symington I agreed to be "a change agent". The purpose was to come in and find new paradigms and new ways of doing business and, if necessary, to replace people in positions of authority in order to make those changes occur.

When I came to the Department one of the first lessons I learned was that many of the upper management positions were held by long-term bureaucrats who, in many cases, had retired on the job and were unwilling to take on new paradigms and new ways of doing business. It, therefore, became essential to remove some personnel and provide opportunities for these old-time managers to find new challenges.

Further, I looked for new management opportunities for staff who were motivated. Therefore, in the past two years, the movement of management personnel to create opportunities for success has been a primary component of my administration.

In this audit you criticize the management changes that I have made and argue for continuity. I would suggest to you that continuity at ADEQ in July 1991 would have resulted in continued dysfunctionality. Indeed, the past management audits which identify "historic" problems with the agency in terms of permitting and enforcement were, in my opinion, the result of the old management. In the past year and a half (after I had an opportunity to implement some new programs and policies) this Department has begun to reduce the backlog of permits and has significantly increased its enforcement presence in the state.

Testimony to this success are the following facts:

- Awarded civil and criminal penalties in excess of$4,000,000 from July, 1991 to present from companies in violation of the state's environmental laws - more than in all prior years combined. (See attached list)

- Increased the number of Drinking Water Systems in full or substantial compliance from 61% FY 1991 to 80% FY 1993

- Increased cost recovery received from responsible parties: $6,564 - FY 1991; $385,867 - FY 1992; $1,322,475 - FY 1993.

- Developed a compliance/enforcement policy and boiler plate orders resulting in an increase from 13 to 41 orders in the Drinking Water program and 3 to 26 orders in the water pollution program from 1992 to 1993.

- Signed four judicial consent decrees and filed 2 civil complaints on WQARF sites in 1992 and 1993 where none were filed previously.

- 73% of agency walk-in customers from May 1993 - December 1993 state that ADEQ staff were more knowledgeable about their job then expected. (Survey)

- Recognition of three agency teams and ADEQ by the 1993 Governor's, "A Spirit of Excellence" program.

- Over 140 agency customers volunteered to help in our total quality/business process improvement effort.

- Inspections of Air Quality industrial discharges rose 36% from 1992 to 1993.

Is everything perfect? Absolutely not. However, we have made significant changes. Those changes have resulted in a better ADEQ both, subjectively and quantitatively. Again we appreciate your acknowledgement of these efforts.

I believe that our accomplishments are substantial, but I think it is important to note that ADEQ is a young agency, having been created in 1987 with 120 employees. Within five years the agency has expanded to over 600 full-time employees, 60 separate programs and has been subject to considerable political and organizational turmoil as evidenced by the turnover in the agency's leadership (five directors in six years). Unfortunately, during this turmoil the agency was faced with balancing the need to focus its resources on the environmental crisis de jure or implementing sound managerial systems. While we know that the political fires must be fought, it is unfortunate that the past senior management did not also spend the necessary resources to establish the fundamental infrastructure to run the agency on a day-to-day basis. It will take time to remediate all the problems.

Let me state that most of your suggestions are helpful, and I am committed to pursuing their implementation. However, most will require either legislation or a short-term diversion of resources from already cash strapped programs. For example:

- Additional employee and manager training would have to be funded from programs already short in resources.

- Legislative changes are needed to fix the public hearing process for new rules. (Currently purposed)

- Lack of experienced agency staff is compounded by the fact that they are nearly 30% below parity with other local governments and the fix would require both resources and changes in DOA personnel classifications. (Proposed)

- Information management and improved file controls would require additional staff, reassigned staff from other programs or new resources. For example, over $700,000 would be needed to convert current underground storage tank files to an accessible optical image file.

- Increasing our current effort to develop policies will require additional program staff, thereby at least temporarily diverting resources from our program implementation (i.e., inspections) which, as you note, also need increased attention.

Finally, I wish to compliment your staff for their professionalism. My only real complaint with the performance audit system is that these same representatives from your office will not be here to help in the difficult work of implementing the recommendations you have proposed.

Very truly yours,

Edward Z. Fox
Director

Attachment

cc: Bill Wiley, Deputy Director, ADEQ
Joe Smith, Director, Administration Division, ADEQ
Nancy Wrona, Director, Air Quality Division, ADEQ
Ethel DeMarr, Director, Waste Programs Division, ADEQ
Brian Munson, Director, Water Quality Division, ADEQ
Bill Thomson, Director, Performance Audit Division, Auditor General's Office

PARTIAL LIST OF CIVIL PENALTIES AWARDED SINCE JULY 1991

1. Tally Defense System - $500,000 - hazardous waste (Hazardous Waste Fund)

2. Lake Powell case - $1.325 million - water quality violations - civil and criminal with Attorney General's Office. $225,000 came to ADEQ (WQARF)

3. Arizona Portland Cement - $367,840 - air and hazardous waste ($40,170 - Air Permits Administration Fund; $327,670 - Hazardous Waste Fund)

4. Sunbelt Refining - $700,000 air, water waste - civil and criminal (multi-year payment plan, $150,000 to AG, $550,000 to ADEQ - 30% - Air Permits Administration Fund; 30% - WQARF; 30% - Hazardous Waste Fund; 10% - Small Water Systems Fund)

5. Mobil - $631,000 and costs - Underground Storage Tank (General Fund)

6. TRW - $35,000 - hazardous waste storage (Hazardous Waste Fund)

7. Allied Aircraft - $120,000 - hazardous waste (aluminum dross) (Hazardous Waste Fund)

8. Los Abrigados - $180,000 - water quality (WQARF)

9. Scottsdale Nisson - $17,000 - vehicle emissions testing (General Fund)

10. Culiver Autos - $22,000 - vehicle emissions testing (General Fund)

11. Tyson Wells RV Park - $5,000 - wastewater/drinking water (WQARF)

12. Page Steele - $2,500 unlawful burning for metal recovery (Air Permits Administration Fund)

13. Pinewood Sewer Company - $50,000 wastewater violations (WQARF)

14. Town of Clifton - $5,000 - wastewater violations (WQARF)

15. Sedona Parcel - $2,300 - wastewater violations ((WQARF)

16. Town of Fredonia - $10,000 - drinking water (Small Water Systems Fund)

17. Rinchem - $40,000 - hazardous waste storage (Hazardous Waste Management Fund)

18. Shelby Wastewater - $41,232 - wastewater (WQARF)

19. Sierra Entrada - $5,000 - wastewater (WQARF)

20. Katherine's Landing - $7,800 - drinking water (Small Water Systems Fund)

NOTE: This list does not include criminal actions where ADEQ assisted the Attorney General's Office or local prosecutors and does not include restitution for cleanup work performed by ADEQ received through the criminal process.