

State of Arizona
Office
of the
Auditor General

PERFORMANCE AUDIT

DEPARTMENT OF ENVIRONMENTAL QUALITY

Aquifer Protection Permit Program,

Water Quality Assurance Revolving Fund Program, and

Underground Storage Tank Program

Report to the Arizona Legislature By Debra K. Davenport Auditor General November 1999 Report No. 99-21 The Auditor General is appointed by the Joint Legislative Audit Committee, a bipartisan committee composed of five senators and five representatives. His mission is to provide independent and impartial information and specific recommendations to improve the operations of state and local government entities. To this end, he provides financial audits and accounting services to the state and political subdivisions and performance audits of state agencies and the programs they administer.

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AUDITOR GENERAL

November 17, 1999

Members of the Legislature

The Honorable Jane Dee Hull, Governor

Ms. Jaqueline E. Schafer, Director Arizona Department of Environmental Quality

Transmitted herewith is a report of the Auditor General, A Performance Audit of the Department of Environmental Quality (ADEQ): the Aquifer Protection Permit program, the Water Quality Assurance Revolving Fund program, and the Underground Storage Tank program. This audit was conducted pursuant to Laws 1998, Chapter 298, §17, and under the authority vested in the Auditor General by Arizona Revised Statutes (A.R.S.) §41-1279.03.

This report addresses issues related to three Arizona Department of Environmental Quality (ADEQ) programs that are responsible for protecting the State's critical water resources from contamination. Specifically, a number of problems were identified with the Aquifer Protection Permit program, which is designed to help prevent groundwater contamination from occurring. Based on its historical performance, the program is unlikely to meet statutory permit processing deadlines, and it has not focused its attention on ensuring that high-risk facilities are among the first facilities to obtain required permits. In addition, ADEQ's ability to manage the program is limited because data is inaccurate and incomplete. Further, although the amount businesses can be required to pay for aquifer protection permit processing is capped in statute, ADEQ has inappropriately solicited additional permit processing monies from some businesses it regulates.

This report also discusses recent changes to the Water Quality Assurance Revolving Fund (WQARF) program, including some of the challenges ADEQ now faces with the shift from a joint to a proportional liability standard. Finally, the report provides

information on the progress ADEQ has made toward implementing recommendations made in a 1998 performance audit of the Underground Storage Tank program (Auditor General Report No. 98-4).

As outlined in its response, ADEQ does not agree with all of our findings, but has agreed to implement all of our recommendations. In particular, ADEQ disagrees with our conclusion that it will not meet statutory deadlines for issuing APP permits.

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

This report will be released to the public on November 18, 1999.

Sincerely,

Debbie Davenport Auditor General

Enclosure

SUMMARY

The Office of the Auditor General has conducted a performance audit of three programs within the Department of Environmental Quality (ADEQ): the Aquifer Protection Permit program, the Water Quality Assurance Revolving Fund program, and the Underground Storage Tank program. The audit was conducted pursuant to Laws 1998, Chapter 298, §17, and under the authority vested in the Auditor General by Arizona Revised Statutes (A.R.S.) §41-1279.03.

All three programs share a goal of protecting Arizona's water. The three programs share a common goal of protecting the State's critical water resources from contamination. The Aquifer Protection Permit program helps ensure that contamination does not reach the State's groundwater by regulating discharges from facilities such as mines, industrial facilities, and wastewater treatment plants. If hazardous substances threaten to, or actually do, contaminate groundwater, the Water Quality Assurance Revolving Fund program oversees investigation and cleanup activities and attempts to recover the associated costs from polluters. The Underground Storage Tank program regulates underground storage tanks and, when those tanks leak and contaminate soil and groundwater, it oversees and helps to fund various cleanup activities.

Aquifer Protection Permit Program

The audit identified four problems affecting ADEQ's ability to manage the Aquifer Protection Permit program. Under this program, ADEQ issues permits that govern the release of potential contaminants from mines and other facilities, such as wastewater treatment plants. The four problems involve:

- 1) The program's likely inability to meet statutory deadlines for issuing permits,
- 2) The need to ensure high-risk facilities obtain required aquifer protection permits,

ance.

- 3) Incomplete and inaccurate data in the information system for administering the program, and
- 4) The need to ensure the program has adequate funding.

Compliance with Statutory APP **Processing Deadlines Is Doubtful** (See pages 9 through 13)

To meet statutory deadlines, the Program will need to double its perform-

ADEQ's ability to meet statutory deadlines for processing aquifer protection permits is doubtful. Current statutory deadlines call for aquifer protection permits to be issued to non-mining facilities by 2004 and to mining facilities by 2006. To meet the 2004 deadline, the program would need to nearly double the number of permits it issues each year. Because the program continues to have persistent staffing and training problems, such a pace is unlikely. Auditor General staff first identified problems with turnover and vacancies in 1993. Management has not established a formal training process to help ensure that new and existing staff have the knowledge needed to make consistent and timely decisions.

If it cannot issue permits at a faster pace, ADEQ's attention may be diverted primarily to addressing new permits rather than those it has already received. A recent law requires state agencies to refund fees and pay penalties to the General Fund if they cannot meet processing deadlines for applications received after August 13, 1999. Because of these penalties, ADEQ may choose to focus on processing newer applications first and may further delay processing older applications that are not subject to penalties.

ADEQ Has Not Focused Aquifer Protection Permit Efforts on High-Risk Facilities (See pages 15 through 17)

ADEQ has not ensured that facilities posing the highest risk to the environment were the first to be required to obtain aquifer protection permits. Beginning in 1992, the law directed ADEQ to establish risk-based priorities for all known facilities that may be releasing pollutants into the groundwater. To give its staff more

ADEQ has not taken action against facilities that have not applied for permits.

experience before tackling all the high-risk facilities, ADEQ elected to use an approach that focused on a combination of low-, medium-, and high-priority facilities. However, slow progress in issuing permits has meant that facilities with some of the most serious potential for groundwater pollution may have been allowed to forgo upgrading pollution control efforts for years. ADEQ has also not taken action against facilities that have ignored the requirement to submit permit applications. Nearly 40 percent of all facilities required to submit permit applications since 1995 have failed to do so.

Incomplete and Inaccurate
Data Limits ADEQ's Ability to
Manage Its Aquifer Protection
Permit Program
(See pages 19 through 24)

Numerous problems with computerized data need to be corrected to enable ADEQ to effectively manage the Aquifer Protection Permit program. Currently, the program's formal tracking database does not provide accurate and complete information about such basic things as the number of permits issued, the time it takes to issue permits, and the status of permits in process. This missing information affects ADEQ's ability to determine if processing times are met, identify where bottlenecks are occurring, and ensure that all required fees are collected. To ensure that these problems do not continue to impact the program and the Department, ADEQ needs to make necessary corrections and establish controls for the data systems it is currently developing or upgrading.

ADEQ Needs to Take Appropriate Steps to Help Ensure APP Program Is Adequately Funded (See pages 25 through 30)

ADEQ has taken an inappropriate action to minimize funding problems in its Water Permits Section, which is responsible for issuing aquifer protection permits. State law requires ADEQ to set fees that are reasonably related to the cost of processing ADEQ solicited additional payments from applicants.

permits, but it also establishes a maximum amount the applicants can be required to pay. Anticipating a funding shortfall, ADEQ, in fiscal year 1998, solicited additional permit-processing monies from some applicants above the amount established in statute. Two applicants have signed agreements that make ADEQ eligible to receive up to \$161,700 in additional payments to continue work on the permits. Although state law does not preclude ADEQ from seeking higher fees to cover its costs, such agreements have the appearance of compromising ADEQ's independence and could result in inequitable treatment of applicants and permit holders.

Rather than soliciting additional monies from businesses that the Department regulates, ADEQ should pursue more appropriate means of ensuring that the program is adequately funded. Specifically, ADEQ should work to change internal practices that may adversely affect its revenue flow. ADEQ could also study the impact of the fee caps, and once reasonable costs are identified, make recommendations to the Legislature about the statutory fee caps, if necessary.

Water Quality Assurance Revolving Fund Program

Change in Liability Approach Presents Unique Challenges to WQARF Program (See pages 39 through 45)

Arizona's newly restructured Water Quality Assurance Revolving Fund, which is the State's program designated to clean up historically contaminated groundwater, is still in the process of adjusting to a significant restructuring the Legislature made in 1997. Under this restructuring, ADEQ can no longer identify a single party who contributed to pollution at a site and hold that party responsible. It must now use its best efforts to identify all contributing parties, allocate responsibility proportionately among them, and determine each party's ability to pay. This new liability standard, known as proportional liability, is considered more equitable because one party is not held solely responsible for all cleanup costs unless it is solely responsible for the contamination. As part of the restructuring, the Legislature also

provided a more stable source of funding. Past cleanup efforts had been hampered by uncertain funding.

It is too early to evaluate the impact of proportional liability. It is too early to determine the full effect of the changes to Arizona's program. However, implementing the proportional liability standard poses some challenges. For example, increased time and effort is needed to identify multiple parties who may have polluted a site and to determine how much of the cleanup costs each party should bear. In addition, if parties are unable to pay their fair share, the State is now responsible for paying for these "orphan" shares. These challenges are unique to Arizona's program in that cleanup programs operated by the federal government and by other states have less complex requirements for identifying parties responsible for contamination and recovering cleanup costs. Because the new procedures have been in place for a relatively short time, not enough progress has been made to assess their full impact.

Underground StorageTank Program

Continued Efforts Needed to Address Efficiency and Funding Issues in the Underground Storage Tank Program (See pages 53 through 58)

The Underground Storage Tank Program has made progress in improving its performance since a 1998 Auditor General performance audit, but continued work is needed. ADEQ has become more efficient in handling leaking underground storage tank cases, reducing a substantial backlog of site characterization plans and closure requests that required ADEQ approval. However, improvements are still needed in the program's computer database for tracking leaking underground tank sites.

The amount of unpaid claims has grown to \$55 million.

Action is also needed to address the lack of funding available for approved cleanups. At the time of the 1998 audit, ADEQ had \$48 million in approved but unpaid claims. This number had climbed to more than \$55 million by the end of fiscal year 1999. In addition, at the end of fiscal year 1999 there were also 541 pending claims requesting a total of more than \$22 million. The

1998 report analyzed several ways to address the issue: raising revenues, limiting claims, eliminating the Fund, and finding ways to reduce the Fund's administrative expenses. Since the 1998 report, some changes and developments have occurred, but the basic situation remains much the same.

A final area in which progress has been slow is in establishing risk-based corrective action rules that would allow efforts to clean up leaking underground storage tanks to focus on those sites posing the greatest danger to the public, although the Legislature has required ADEQ to establish such rules by January 2000. ADEQ recently proposed these rules and anticipates a May 2000 effective date.

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INTRODUCTION AND BACKGROUND

The Office of the Auditor General has conducted a performance audit of three programs within the Department of Environmental Quality (ADEQ): the Aquifer Protection Permit (APP) program, the Water Quality Assurance Revolving Fund (WQARF) program, and the Underground Storage Tank (UST) program. The audit was conducted pursuant to Laws 1998, Chapter 298, §17, and under the authority vested in the Auditor General by Arizona Revised Statutes (A.R.S.) §41-1279.03.

The APP, WQARF, and UST programs all share the common goal of protecting the State's critical water resources from contamination. The APP program is designed to help prevent pollutants from reaching the soil and groundwater; however, if contamination does occur,

Common Goal of APP, WQARF, and UST:

Strive to protect water resources

both WQARF and UST are responsible for overseeing cleanup efforts. The APP program serves as the cornerstone of the State's groundwater protection efforts by regulating facilities, such as mines and wastewater treatment plants, to ensure that any pollutants they discharge are minimized. WQARF, on the other hand, is responsible for cleaning up hazardous substances that were handled or disposed of improperly and contaminated or threaten to contaminate groundwater. It also works to recover the associated cleanup costs from polluters. Similarly, the UST program regulates underground storage tanks and, when those tanks leak, it oversees and helps to fund various cleanup activities.

Audit Scope, Methodology, and Limitations

This special audit presents recommendations in five areas:

Resolving staffing and training problems that hamper the Department's ability to meet statutory deadlines for processing permits.

- Focusing permit efforts on those facilities with the highest potential for contaminating the groundwater.
- Improving the management information systems for the Aquifer Protection Permit program.
- Developing a reasonable and appropriate course of action for minimizing funding shortfalls.
- Improving various aspects of the UST program's management.

In addition, the report discusses the WQARF program's progress since it was restructured in 1997. The discussion of this issue does not include recommendations because not enough time has elapsed to evaluate the full effect of the changes.

Throughout the assignment, Auditor General staff encountered a number of limitations in obtaining information through data analysis and interviews about the programs' performance and progress.

■ Computerized data for aquifer protection permits is incomplete—Computerized data about permits is recorded in both the formal Water Permits and Certifications Tracking Database as well as in separate informal spreadsheets maintained by individual staff. Staff who created the spreadsheets indicated that the spreadsheets may not contain information about all permits; however, auditors found that information in the spreadsheets was still more complete than in the formal database.

In addition, auditors attempted to determine whether ADEQ's formal water permits database could be used to determine how long it took to complete specific steps in the permitting process. Auditors reviewed information contained in the system for a total of 99 issued permits and determined that staff generally failed to record the necessary

dates in the system.¹ Specifically, the database contained complete information about critical steps in the process for only 17 of the 99 permits.

■ Computerized data is inaccurate—Auditors compared the formal permit tracking database and the spreadsheets to a random sample of 63 application and permit files. The review found that the application receipt and permit issue dates were inaccurate in both the formal database and the spreadsheets. Consequently, auditors were unable to use either system to determine the length of time it takes ADEQ to issue aquifer protection permits.

Accurate data about backlogs in the UST program is also unavailable since the program has yet to correct and validate all of the information in its tracking database (USTracks) as recommended in a 1998 Auditor General review (Report No. 98-4).

■ Reliable explanations were difficult to obtain—In several instances auditors could not obtain explanations about ADEQ's historical practices, and how ADEQ interprets its statutes and rules, because there has been turnover of management staff several times within the past year. In addition, in the WQARF program, it was difficult to determine whether ADEQ was meeting its statutory responsibilities, since it has not developed sufficient policies and procedures to guide staff. For example, to answer the basic question of when a contaminated site is officially placed on the WQARF registry, auditors spoke to six different staff, including the WQARF program manager, but were unable to obtain a reliable answer. This date is critical since it marks the beginning of several steps ADEQ must take to begin site cleanup, at least one of which has a statutory deadline. In addition, decisions about WQARF program implementation were difficult to document since the program did not adequately maintain required WQARF Advisory Board meeting minutes.

Includes the 63 randomly selected permits issued between June 1991 and April 1999, as well as 36 permits applied for and issued since January 1997, which was about the time the formal database was upgraded to begin tracking dates for steps in the permit process.

In conducting the audit, auditors also interviewed representatives from the EPA and equivalent programs in other states; environmental experts; representatives from stakeholder groups including municipalities, mining, and power generation; and permit applicants. Auditors also attended advisory board and committee meetings relating to the programs. In addition, federal environmental regulations, state statutes, and rules relating to the programs were reviewed. Auditors also reviewed such documents as ADEQ's annual reports and other publications that it provides to applicants, as well as a 1995 fee study completed for the APP program by Arthur Andersen & Co., SC.

This audit was conducted in accordance with government auditing standards.

The Auditor General and staff express appreciation to the Director and staff of the Department of Environmental Quality for their cooperation and assistance throughout the audit.

AQUIFER PROTECTION PERMIT PROGRAM



INTRODUCTION AND BACKGROUND

The Aquifer Protection Permit (APP) program is a critical component of the State's groundwater protection efforts since it issues permits to prevent groundwater contamination from occurring. Approximately 65 percent of the population in Arizona utilizes groundwater for drinking water. In fact, many communities in the State depend on groundwater as their principal source of drinking water. In recognition of this fact, the Environmental Quality Act of 1986 was enacted to establish a comprehensive groundwater management program in Arizona. The Act required ADEQ to begin regulating discharges of pollutants that may adversely impact aquifers, which are underground layers of sand, gravel, or porous rock where water collects.

About 65 percent of Arizonans use groundwater for drinking. The APP program is responsible for issuing permits to regulate pollutants discharged by facilities including many new and existing mines, wastewater treatment plants, and industrial facilities. Applicants must demonstrate that they are using the best available demonstrated control technology to ensure that water quality standards will not be violated or that the groundwater will not be further degraded. The permits frequently contain monitoring requirements to ensure that the facility remains in compliance with APP provisions, providing an additional way of protecting the public. New facilities must obtain a permit before they can begin operations. Facilities that were operating under other permits or agreements may continue to do so while their aquifer protection permit applications are being processed. Since 1992, the program has issued approximately 296 individual aquifer protection permits and has an estimated 200 more permit applications in process.

Staffing and funding—Three units within ADEQ's Water Permits Section are responsible for most APP-related activities, including issuing permits, assessing the impact of modifications made to permitted facilities, and approving closure plans for facilities no longer in operation. The three units are approved to employ 28 full-time professional staff, not including supervisors. Several of these staff have engineering or hydrology backgrounds to enable them to assess permit application documen-

tation to determine whether it demonstrates that pollutants will be minimized or, in some cases, eliminated. These staff also perform other duties such as providing technical assistance to applicants or to individuals who may later require a permit.

The Water Permits Section received revenues of approximately \$2.9 million in fiscal year 1999. These monies are used to support several activities, including issuing aquifer protection permits. About 43 percent of the revenues in fiscal year 1999 were from the General Fund and about 17 percent were from federal grants. The remaining 40 percent is from various fees, including annual registration fees paid by permit holders. Other fees include those paid by applicants for permit processing. Currently, ADEQ is allowed by rule to charge applicants \$49 per hour to process APP applications. However, state law limits the amount that applicants must pay. Permit holders cannot be required to pay more than \$16,000 per permit or \$25,000 for a site where multiple permits may be required, such as a mine. State agencies, such as the Department of Corrections, are exempt from paying processing fees.

FINDING I

COMPLIANCE WITH STATUTORY APP PROCESSING DEADLINES IS DOUBTFUL

ADEQ's ability to meet new statutory deadlines for processing aquifer protection permits is doubtful, even under the extended schedule granted by the Legislature in 1999. Persistent problems with staffing and training have not been corrected. Because ADEQ cannot comply with the new deadlines unless it essentially doubles the number of permits issued each year, such continued problems can only hamper its ability to meet the new deadlines. In addition, because a new statute has created financial penalties for taking too long to issue permits applied for after August 13, 1999, ADEQ may further delay issuing permits that are not subject to the law.

In 1999 the Legislature granted ADEQ an extension for issuing permits.

In 1992, the Legislature required ADEQ to identify facilities that could be contaminating the State's groundwater and, if warranted, to begin regulating them through aquifer protection permits. Initially, the deadline for issuing permits was set for 2001. However, in 1999 the Legislature granted an extension until 2004 (for non-mining facilities) and 2006 (for mining operations). Issuing aquifer protection permits to such facilities is ADEQ's most effective way to ensure that facilities are using the best available technologies for controlling pollutant discharge. In addition, without such permits in place, ADEQ may lack the information needed to determine if groundwater is being contaminated. These permits can require facilities to upgrade pollution control efforts and to routinely monitor pollutants in their discharges and groundwater and report the results to ADEQ. In contrast, facilities that have not obtained such permits may not be using the best available technology for controlling pollutants.

Permit Processing Affected by Persistent Staffing and Training Problems

ADEQ's ability to meet the new deadlines is affected by two long-standing and persistent problems. ADEQ's process for issuing permits was analyzed in a 1993 Auditor General report (Report No. 93-5) and a number of factors that were contributing to delays were identified. Two of these factors remain unresolved:

- The program continues to experience staff turnover and vacancies, which impacts its ability to ensure timely and efficient permit processing.
- In addition, management also has not developed a formal staff training program to provide additional guidance and direction to staff.

Staffing problems still exist—Turnover and vacancy problems were apparent when the 1993 report was issued. At that time, more than 60 percent of project officers responsible for processing permits had been with the APP program a year-and-a-half or less. In addition, two of three supervisors who oversaw the process had been with the program for fewer than six months. To resolve the problems, the 1993 report recommended that ADEQ determine whether project officer positions needed to be upgraded to improve the staff's level of technical knowledge and experience. It also suggested establishing engineering support staff positions to assist with reviewing the technical portions of permit applications.

Seven of the 28 professional staff positions were vacant.

ADEQ has taken steps to reduce turnover and vacancies, but these problems persist. In 1998, ADEQ received salary increases for its hydrologists, and it has increased recruiting salaries for both professional and clerical staff in the APP program. However, it has not been successful in obtaining salary increases for most existing APP staff, such as project officers and engineers. As of July 1999, 7 of the program's 28 professional staff positions designated for aquifer protection permit processing were vacant. Of the 21 staff in place, 6 had been with the program 8 months or fewer. In addition, there has been turnover in each of the three supervisor positions at least once during the year. Turnover in

these staff and supervisor positions leads to permit processing delays, since reassigning applications can result in work being duplicated.

Lack of formal training for staff may delay permit process.

Formal training is still lacking—Program managers have yet to develop a formal training program to guide and direct staff. The 1993 report indicated that ADEQ could have improved permit processing timeliness by taking steps such as establishing formal training for staff who process aquifer protection permits. ADEQ management still has not developed a formal structured training program which, according to one project officer, could improve consistency and give staff the confidence to make timely decisions about permit applications. Some APP staff indicate that the current informal mentoring system is inadequate, and the lack of formal training can limit their ability to ensure that permits are processed consistently and efficiently.

ADEQ Is Unlikely to Meet Extended Permit Processing Deadlines

Because these staffing and training problems have not been resolved, ADEQ is unlikely to meet its new deadlines for regulating facilities that could be polluting the State's groundwater. Although ADEQ staff indicate that it is possible to meet the extended deadlines, the program's past performance does not support this assessment. Since the initial statutory deadline became effective in 1992, the Department has issued 296 individual aquifer protection permits. According to analysis of Department records, at least 255 more non-mining facilities have not yet received aquifer protection permits. To process these 255 permits as well as the estimated 50 new aquifer protection permit applications received each year, ADEQ will need to process approximately 106 permits during each of the next four-and-a-half years

tions.

Includes 127 non-mining facilities that should have submitted aquifer protection permit applications between January 1995 and July 1999, reduced by one-third to account for the possibility that all these facilities

may not require an individual aquifer protection permit. Also included are 170 aquifer protection permit applications in process. Calculation does not include 28 aquifer protection permit applications in process and 5 overdue aquifer protection permit applications from mining opera-

to meet its 2004 deadline. However, in 1998 the program issued only 58 individual permits to non-mining facilities, which was the highest number issued in any one year since 1992.

Ability to Meet Deadline May Be Further Impacted by New Permit Processing Requirements

ADEQ's ability to meet its deadlines for permitting facilities may be further impacted by a statute that establishes penalties for slow processing of applications received after August 13, 1999. For permit applications received after this date, ADEQ must meet specific deadlines for such activities as determining whether an application is complete (for this step, the period typically allowed is 35 days). If ADEQ does not meet the time frames, it is required to refund fees. It also must pay a penalty to the General Fund equivalent to 1 percent of the refunds for each month that it fails to make a decision to issue or deny a permit. Because of these penalties, ADEQ may choose to focus on processing newer applications first and may delay processing applications that are not subject to penalties. To ensure that the applications that are not subject to statutory processing time frames do not languish, ADEQ needs to develop a plan for addressing these applications and monitoring progress to ensure timely issuance of permits.

ADEQ anticipates having new Unified Permit rules in place in early 2001, which may reduce the number of aquifer protection permits that need to be processed.

Recommendations

1. ADEQ should continue working to upgrade professional positions within the APP program as it sees necessary.

- 2. ADEQ needs to develop and implement a formal training process for staff who process aquifer protection permits to help ensure that permits are processed efficiently and consistently.
- 3. ADEQ management needs to develop and implement a plan for addressing aquifer protection permits in process to ensure timely issuance of permits that are not subject to statutory penalties.



FINDING II

ADEQ HAS NOT FOCUSED AQUIFER PROTECTION PERMIT EFFORTS ON HIGH-RISK FACILITIES

ADEQ has not ensured that some facilities obtain aquifer protection permits to further reduce the risk of these facilities releasing unacceptable levels of pollutants into the State's groundwater. Beginning in 1992, the law required ADEQ to prioritize all known facilities that may be releasing groundwater pollutants. Although the Department did develop a prioritized list of facilities, its workplan did not concentrate on the highest-priority facilities. Furthermore, at least 132 of the facilities that ADEQ has contacted about submitting an application have not done so. Some have ignored the requirement for as many as four years.

ADEQ Did Not Focus Permitting Efforts on High-Risk Facilities First

ADEQ has not ensured that facilities posing the highest risk to the public and the environment were the first to be required to obtain aquifer protection permits. Instead, ADEQ elected to use an approach that focused on a combination of low-, medium-, and high-priority facilities.

ADEQ required to prioritize facilities based on risk—A.R.S. §49-241-D, effective in 1992, required ADEQ to prioritize all known facilities required to obtain an aquifer protection permit, basing the priority on the level of risk posed to the public. The initial list that ADEQ developed had entries with risk-based priorities ranging from a low of 0 to a high of 99. All of the facilities appearing on this "call-in" list were statutorily required to obtain permits by 2001, and ADEQ's work plan required a set number of facilities to submit applications each year up through 1999. The facilities appearing on the call-in list for each year were to receive a letter from ADEQ notifying them that they must submit an application and providing a due date for the facility's response. As of December 1999, all facilities were to have received a notice and submitted an application.

Some facilities with the most serious potential for groundwater pollution were not permitted first.

ADEQ did not follow the priorities list—When ADEQ began calling in facilities for permitting, it did not require the highest-priority facilities to respond first. Instead, ADEQ requested applications from a mix of low-, medium-, and high-priority facilities each year. As a result, some facilities that were not required to submit applications until 1999 had higher risk priorities than facilities called in previous years. For example, in 1996 at least 8 facilities were rated at 13 or less, while in 1999 approximately 7 facilities had a rating of 55 or higher. By delaying the permitting process for these high-risk facilities, ADEQ potentially allowed some facilities to forgo upgrading pollution control efforts for several years.

According to ADEQ staff, it was felt that the applications for high-risk facilities would take a long time to process, and focusing only on these applications could make ADEQ unable to meet its statutory deadlines.¹ At the time the call-in list was implemented, management felt that existing staff was insufficient and too inexperienced to process applications from all high-risk facilities, such as mines, within these deadlines. However, ADEQ has still been unable to meet its initial 2001 deadline for issuing all permits. In fact, in 1999 it received an extension allowing it until 2004 to complete the processing of all non-mine APPs, and until 2006 for mine APPs (for further discussion, see Finding I, pages 9 through 13).

ADEQ Has Not Taken Action Against Nonresponsive Facilities

nored the requirement to submit aquifer protection permit applications. More than 40 percent of all the facilities required to submit permit applications since 1995 have failed to do so. Between January 1, 1995 and July 1, 1999, a total of 282 facilities were required to submit APP applications; however, at least 132 have not done so. Even more facilities may be delinquent, but information about the status of facilities called in between 1992 and

ADEQ has also not taken action against facilities that have g-

Since 1995, 132 facilities have failed to submit required permit applications.

1995 is not readily available. Of the 132 known delinquent facili-

The statute establishing the call-in list required ADEQ to issue APPs to one-third of the facilities on the list by 1995; two-thirds by 1998, and all permits by 2001.

ties, many have ignored the requirement to apply for an APP for years. For example, applications from 18 facilities have been overdue since 1995, and applications for 34 others have been overdue since 1996.

This lack of action is not in keeping with ADEQ's stated policies. According to ADEQ policy, the Water Permits Section should have sent these delinquent facilities a follow-up letter within one week of the application due date. If the facilities did not respond to the second letter after 30 days, they should have been referred to the Water Quality Compliance Section for enforcement action. The Compliance Section would then send an enforcement letter, and if facilities are still nonresponsive, the section can seek penalties of up to \$25,000 per day. According to data provided by the Water Permits Section, between January 1995 and July 1999 one facility was submitted to the Compliance Section for failure to respond. However, this delinquent facility was not turned over to the Compliance Section until the application was nearly three years past due. Further, the Compliance Section has no record of actually receiving this case.

Recommendation

1. ADEQ needs to take prompt action to address those facilities that have failed to respond to the Department's requests to submit APP applications, and it should initiate this action beginning with highest-risk/highest-priority facilities.



FINDING III

INCOMPLETE AND INACCURATE DATA LIMITS ADEQ'S ABILITY TO MANAGE ITS AQUIFER PROTECTION PERMIT PROGRAM

Numerous problems with computerized data need to be corrected to enable ADEQ to effectively manage the APP program. Currently, the program's formal tracking database does not provide accurate and complete information about such basic things as the number of aquifer protection permits issued, the time it takes to issue permits, and the status of permits in process. This missing information affects ADEQ's ability to determine if processing times are met, identify where bottlenecks are occurring, and ensure that all required fees are collected. To ensure that these problems do not continue to impact the program and the Department, ADEQ needs to make necessary data corrections and establish controls for the data systems it is currently developing or upgrading.

Basic Information About APP Workload and Processing Times Is Unavailable, Inaccurate

Critical database information is often missing or erroneous.

Although the database for tracking aquifer protection permits has the capability of capturing most of the data necessary to monitor permit processing activities, the data itself is commonly unavailable or inaccurate. The database, officially known as the Water Permits and Certifications Tracking Database, can capture information about facilities, owners, and the types of permits issued, and it is designed to enable management and staff to check the status of a permit in process and determine what additional steps still need to be completed. However, staff often fail to enter key information into the database, and when they do, the information entered is often erroneous. These problems have resulted in the use of a separate informal system to track information about overall processing times, but some of the same problems plague this informal system as well.

Basic information about the program is not readily available—Critical information needed to determine such basic things as the number of permits issued or in process, the amount of time it takes to process them, and the status of individual permits is not regularly recorded in the database. For example, the database identifies 237 individual aquifer protection plans issued or in process, while other data sources indicate that there are as many as 533.

Several critical dates are not regularly recorded. Auditor General staff reviewed computerized records for a random sample of 63 issued aquifer protection permits and found that the database did not contain:

- The date the application was received for 22 percent of the permits,
- The date the permit was issued for 29 percent, and
- Other dates necessary to track major milestones in the permit process, such as reviews to determine whether the application was complete and whether it appropriately demonstrated that the applicant met all requirements for a permit. These and other critical dates were recorded only 17 to 33 percent of the time.

Critical information is often erroneous—The limited information that is available is often incorrect. When documentation from the random sample of 63 files was compared to database entries, the database was found to contain numerous errors. Specifically, the database indicated an incorrect date for application receipt 43 percent of the time. The permit issue date was also incorrect nearly 7 percent of the time.

Database problems lead to alternative tracking system—Because of the database's unreliability, Water Permits Section staff use separate spreadsheets to track information about aquifer protection permits; however, the data in this informal system is also often incorrect. A comparison of documentation from the random sample of 63 files with the spreadsheet containing information about issued permits showed that the spreadsheet did not contain the correct date the application was received nearly 50 percent of the time. It also did not contain the correct date that

the permit was issued about 5 percent of the time. This secondary tracking system, which still does not contain accurate data, creates additional work for staff and would not be necessary if ADEQ's formal data tracking system were appropriately maintained.

Missing Data Affects Ability to Manage Program

Because critical information is not readily available, ADEQ cannot effectively manage the APP program. Management difficulties include failing to ensure that processing times are met, being unable to identify where bottlenecks are occurring so that they can be fixed, and possibly not collecting fees from some permit holders.

Management has failed to ensure that staff meet permit processing deadlines—Since 1989, management has been responsible for ensuring that staff meet processing deadlines established in ADEQ's administrative rules. However, management has not required staff to record the information needed to allow management to monitor progress toward issuing permits. The deadlines include such requirements as reviewing an application for completeness within 30 days, issuing a letter of intent to permit a facility within 90 days of receiving the application, and issuing the permit within 30 days of the date the public comment period ends. Although ADEQ's own administrative rule did not set any penalties for ignoring the deadlines, recent legislation sets penalties if processing deadlines are not met. Thus, effective tracking becomes all the more critical.

Bottlenecks cannot be easily identified and eliminated—Incomplete and incorrect data limits management's ability to determine why permit processing delays occur and to correct the problems that are within ADEQ's control. It has taken several years for ADEQ to issue some permits, but management cannot easily use the database to determine whether processing delays are the fault of the applicant or ADEQ. As a result, making such determinations requires reviewing the files and, based on correspondence, manually calculating the time that ADEQ was responsible for the permit versus the time it was outside of ADEQ's control.

Poor data management can impact fee collections—Because the information in the database is incomplete, annual registration fees may not be collected from some facilities. Certain types of facilities, such as wastewater treatment plants, must pay annual registration fees ranging from \$25 to \$5,000 based on the amount of pollutants they discharge per day. However, the billing list is generated from the formal tracking database, which is an incomplete source of information about issued permits. For example, when Auditor General staff compared the information in the database to the information recorded in informal spreadsheets, the informal spreadsheets contained at least 40 permitted facilities that were not listed in the database.

Efforts Needed to Prevent Future Data Problems

The passage of recent legislation penalizing slow permit processing, combined with the need to correct possible Y2K problems, have recently led ADEQ to develop new and upgraded databases. Currently, ADEQ is implementing a newly developed department-wide tracking database to monitor the time it takes to issue a wide variety of permits and licenses. At the same time, it is also beginning work on upgrading the existing Water Permits and Certifications Tracking Database, which is still needed to provide historical information and to track information that will not be recorded in the department-wide system. Given the problems described above, ADEQ needs to take steps to ensure that these systems produce useful and accurate information.

Accurate and complete information is critical since ADEQ now faces financial penalties for slow permit processing.

Department-wide database was recently developed—Legislation effective in 1999 requires ADEQ and other state agencies to write rules establishing time frames for issuing licenses and permits. The statute also imposes financial penalties for not meeting these deadlines. In ADEQ's case, beginning August 14, 1999, penalties will be assessed if it does not meet processing deadlines for some 489 different categories of permits and licenses, including aquifer protection permits. Consequently, ADEQ has established a department-wide database to track compliance. This system, known as the Licensing Time Frame Database, was piloted between January and August 1999 to ensure that it accurately captured the required information. Errors in the existing Water Quality Permits and Certifications Tracking Database should not

impact the new system because data from the existing system will not be added to the new one.

Other database upgrades underway—Because the Licensing Timeframe Database is not designed to track all necessary permit information, such as day-to-day activities and permit provisions, work was recently begun to upgrade the Water Permits and Certifications Tracking Database as well. The upgrade will make the database Y2K compliant so that historical data is preserved. The upgrade also involves converting the database to a Windows format so that it is easier to use and compatible with other department databases. As part of this process, a project team has begun meeting with staff to determine what other database changes may be necessary or useful. The project is in the early stages, and necessary plans for cleaning up existing data and for improving controls over data entry have not yet been established.

Steps are needed to protect data integrity—ADEQ needs to take steps to ensure that the same problems currently plaguing the existing tracking systems are not perpetuated, either in the new department-wide database or in the upgrades to the existing database. For both systems, ADEQ needs to obtain management reports that would identify whether staff are actually entering information and enable the Department to track progress toward issuing permits. It also needs to establish procedures for verifying data accuracy in both systems and for cleaning up existing data in the Water Permits and Certifications Database.

Recommendations

ADEQ should take the following steps to ensure that data in its databases is accurate and complete enough to manage the Aquifer Protection Permit Program:

- 1. For the Water Permits and Certification Tracking Database, developing and implementing a plan for cleaning up information already entered into the database and a process for monitoring and verifying the accuracy and completeness of information entered in the future.
- 2. For the Licensing Timeframe Database, developing and utilizing management reports to determine whether staff are entering complete data in a timely manner; and developing procedures for verifying the accuracy of this data.

FINDING IV

ADEQ NEEDS TO TAKE APPROPRIATE STEPS TO HELP ENSURE APP PROGRAM IS ADEQUATELY FUNDED

ADEQ has taken an inappropriate action to minimize funding problems in its Water Permits Section, which is responsible for issuing aquifer protection permits. State law requires ADEQ to set fees that are reasonably related to the cost of processing permits, but it also establishes a maximum amount the applicants can be required to pay. Anticipating a funding shortfall, ADEQ solicited additional permit processing monies directly from some aquifer protection permit applicants above the amount established in statute. Although state law does not preclude ADEQ from seeking additional fees to cover its costs, such agreements have the appearance of compromising ADEQ's independence and could result in inequitable treatment of applicants and permit holders. To avoid appearing to compromise its independence by soliciting additional monies from businesses that the Department regulates, ADEQ should pursue appropriate means of ensuring that the APP program is adequately funded.

Department Sought Additional Monies from Some Applicants

Statutes cap the amount ADEQ can charge.

Under state law, ADEQ is limited in the amount it can charge to process an aquifer protection permit. Although statute requires ADEQ to set fees that are reasonable given the Department's costs to process aquifer protection permits, it also caps the amount that ADEQ can charge. The limit is set at \$16,000 per individual permit and \$25,000 per site with multiple permits. ADEQ's rules establish a charge of \$49 per hour for the time it spends on these permits. However, because some applications may be difficult and time-consuming to review, the maximum charges may be reached before the permits are issued. Once the fee cap is reached, ADEQ cannot require applicants to pay more for work it performs in connection with permits.

In fiscal year 1998, the Department anticipated a funding short-fall in its Water Permits Section and the fee caps were thought to be at least partially responsible. One means the Department used to attempt to resolve the problem was soliciting additional monies directly from some APP applicants. At least two applicants have since signed waiver agreements to pay fees in excess of the fee cap. Given ADEQ's regulatory role with regard to these applicants, such funding arrangements do not appear appropriate.

ADEQ asked some applicants to voluntarily pay more than required—At the end of fiscal year 1998, ADEQ sent letters to approximately 18 mines indicating that fees were not sufficient to pay the salaries of mining permit writers and that staff layoffs would further delay permit processing unless the shortfall was addressed. These mines were selected because ADEQ staff thought that their applications had reached the fee cap. The letter proposed that the affected mines voluntarily agree to pay any costs ADEQ incurred in excess of the fee caps. It also noted that ADEQ had sought a one-time donation from the mines in January 1998 but had received no response.

ADEQ suggested that applications could be expedited if the mines paid additional monies.

According to the letter, if the mine agreed to pay the excess costs, the permit application could be expedited since it would be worked on during staff's "billable" time. At the time the letter was written, management had directed staff to maximize the amount of time spent working on permits that had not yet reached the fee cap to generate "billable hours." Management's budget goal is for 62 percent of staff time to be billable for each pay period. Generating these billable hours came first: staff were not to work on applications for those facilities considered to be already at the fee cap until they had reached their quota of billable hours.

Two facilities have agreed to pay excess costs—Although no applicants directly responded to the letter, two have signed an alternative fee cap waiver agreement that was developed by ADEQ and the Arizona Mining Association (AMA). One applicant has agreed to pay up to \$147,000 over the fee cap, and the other up to \$14,700 over the cap. These dollar amounts are based on ADEQ's estimates of the additional time needed to issue these permits. As part of the agreements, ADEQ is required to establish a work plan outlining tasks to be completed and an accompanying time schedule. The applicants can terminate the agree-

ments at any time and receive reimbursement if ADEQ fails to perform in accordance with the work plan and schedule.

The AMA indicated that one reason it chose to participate in developing the agreement was because the agreement could enable both ADEQ and the AMA to obtain more reliable information about the actual time and costs required to issue an aquifer protection permit. According an AMA representative, there is concern about whether the Department's records are accurate enough to determine the true cost of issuing these permits. The AMA representative said the industry feared ADEQ would attempt to change the fee cap without accurate information. By contrast, the waiver requires ADEQ to outline and commit to a work plan, which the AMA felt would provide better information about the cost of issuing the permits.

ADEQ gives the appearance of compromising its independence by receiving additional monies from some permit applicants. **Agreements do not appear appropriate given ADEQ's regulatory role**—Although not illegal, the agreements appear inappropriate given ADEQ's regulatory relationship with these permit applicants. By receiving additional monies from some applicants, ADEQ gives the appearance of compromising its independence and raises questions about its ability to make impartial regulatory decisions. In fact, an AMA representative indicated that another reason that the AMA chose to work with ADEQ on the fee waiver was that it wanted to establish a client/consultant type of relationship with the Department.

ADEQ Should Use More Appropriate Means of Covering Its Costs

Rather than soliciting voluntary contributions from businesses that the Department is responsible for regulating, ADEQ should pursue other means of ensuring that the program is adequately funded. Specifically, ADEQ should work to change internal practices that may adversely impact its revenue flow. In addition, ADEQ could seek statutory changes to the fee caps, if necessary, to enable it to recover more of its costs for issuing permits.

Changes to some ADEQ practices could lessen the likelihood of shortfalls—ADEQ needs to change some of its practices that may contribute to irregular revenues as well as funding short-

falls. ADEQ could change its process for billing permit applicants and also update its budgeting assumptions:

- ADEQ charges an initial fee to begin processing an aquifer protection permit, but it does not normally bill for any additional processing costs until the permit is issued. One reason that applicants are not billed throughout the process is that deficiencies in the Department's accounting system force staff to manually calculate fees owed for permit processing. Because of this, there is not an efficient way to begin billing as soon as permit processing fees exceed the initial application fee. Although the delay does not affect the total amount collected, it does affect cash flow since the Department may wait months or even years to recover its costs.
- Budget assumptions do not accurately reflect costs— ADEQ also needs to reassess its current budgeting assumptions to ensure that it either earns enough through fees or requests sufficient General Fund appropriations to cover program costs. Currently, the Water Permits Section operates under the assumption that 62 percent of staff time needs to be devoted to activities that are "billable," such as processing permits that have not yet reached the fee cap. The figure of 62 percent of "billable" staff time stems from a 1995 study by Arthur Andersen & Co., SC. However, a number of assumptions made in this study are no longer true. First, activities that the study assumed were billable, including preapplication meetings and travel, currently are not billable according to the Department's Administrative Rules. The study also did not account for the time spent processing permits for state agencies, which are statutorily exempt from paying fees for permits obtained from ADEQ. Finally, salaries and other program expenses have risen since the study was performed.

In revising its budgeting assumption, ADEQ should consider such things as whether it should modify its rules to allow it to charge for additional activities, and whether the hourly rate should be increased to reflect current salaries and related expenses. Once an accurate productive-time budget assumption is developed, ADEQ needs to assess actual staff productivity and develop productivity standards. Currently, professional staff who are responsible for reviewing aquifer protec-

tion permit applications and processing permits are not held to productivity standards. Without such standards, it is difficult to accurately budget, evaluate staff, and ensure that permits are issued within reasonable time frames.

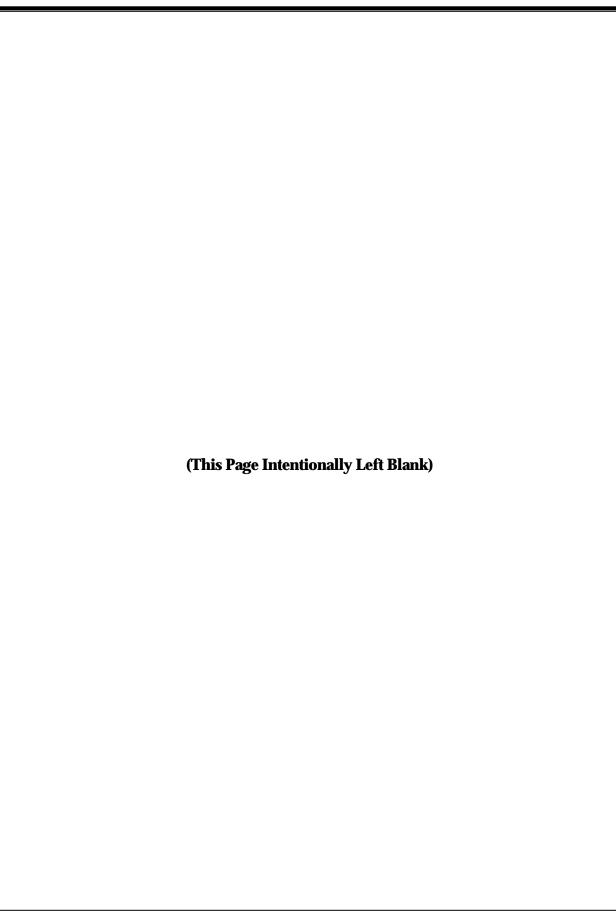
Program could seek a statutory change—In addition, because statutory restrictions on recoverable costs can contribute to funding shortfalls, ADEQ could either seek to modify these restrictions or seek additional General Fund monies to support the program. To do so, ADEQ would first need to identify reasonable and actual costs for permitting complex facilities, such as mines, that may require a long review time and/or multiple permits. Then, if necessary, it could develop appropriate recommend ations to the Legislature for changing the statutory fee cap.

Recommendations

ADEQ needs to use more appropriate means for ensuring adequate funding for its Water Permits Section, which includes the APP program, by:

- Billing facilities for work done throughout the permit process once the total charge exceeds the initial application fee collected;
- Revising its budgeting assumptions to better reflect the actual costs of operating the Water Permits Section. As part of this process, the types of recoverable charges as well as the hourly fee rate should be reassessed and ADEQ should modify its administrative rules accordingly;
- 3. Establishing productivity standards for professional staff who are responsible for issuing permits and monitoring their productivity; and,
- 4. Identifying reasonable and actual costs for permitting facilities that may require long review time, multiple permits, and/or several potential modifications to permits in the future and, if necessary, develop recommendations to the Legislature for changing statutory fee caps.

WATER QUALITY ASSURANCE REVOLVING FUND PROGRAM



INTRODUCTION AND BACKGROUND

Years of improper handling and disposal of hazardous wastes have contaminated the soil and groundwater in various locations throughout Arizona. These contaminants have come from landfills, mines, and many other industrial and commercial operations ranging from semiconductor manufacturing to dry cleaning. To help address contamination cleanup nationwide, Congress created the Federal Superfund in 1980.¹ Because the Federal Superfund lacks the resources to clean up all contaminated sites, Arizona and several other states have created their own state superfunds. Arizona's superfund, known as the Water Quality Assurance Revolving Fund (WQARF), was established in 1986.

Currently, the WQARF program is working to facilitate cleanup of 27 sites in Arizona. As shown in Figure 1 (see pages 34 and 35), most of these WQARF registry sites are located in the metro Phoenix and Tucson areas. WQARF staff also monitors the voluntary cleanup efforts of owners/operators at an additional 13 sites. WQARF's mission is:

To protect the public health and the environment and restore natural resources by assessing and investigating sites, ensuring cleanup of sites that have hazardous resource contamination of the soil and/or water and recovering the Arizona Department of Environmental Quality's costs from responsible parties.

WQARF investigation and cost-recovery process—The WQARF program involves a multi-step process for cleaning up contaminated sites. As shown in Figure 2 (see page 36), there are six major steps, many of which may run concurrently.

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¹ The Federal Superfund was created by the Comprehensive Environmental Response Compensation and Liability Act.

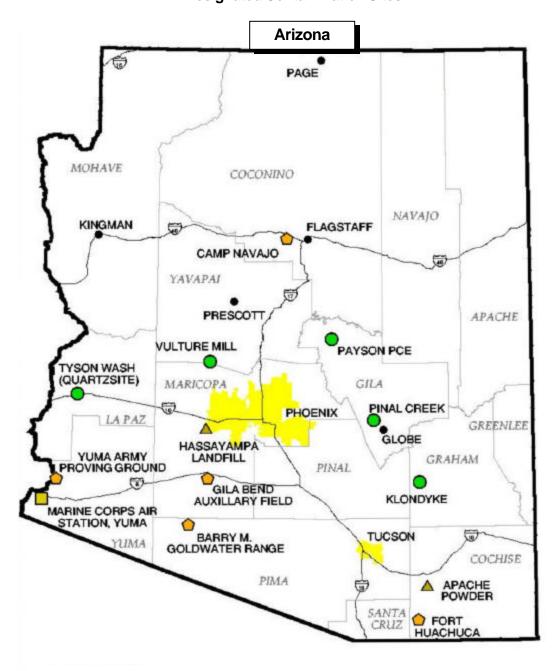


Figure 1

Designated Contamination Sites

WQARF Arizona Water Quality Assurance Revolving Fund program designated sites.

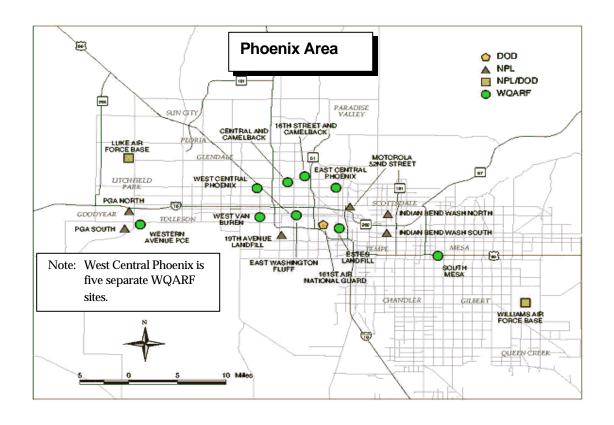
U.S. Department of Defense owned or operated sites.

NPL National Priorities List sites that the Federal Superfund oversees.

NPL/DOD National Priorities List sites that are also Department of Defense bases or facilities.

Source: Obtained from Arizona Department of Environmental Quality website:

www.adeq.state.az.us/waste/sps



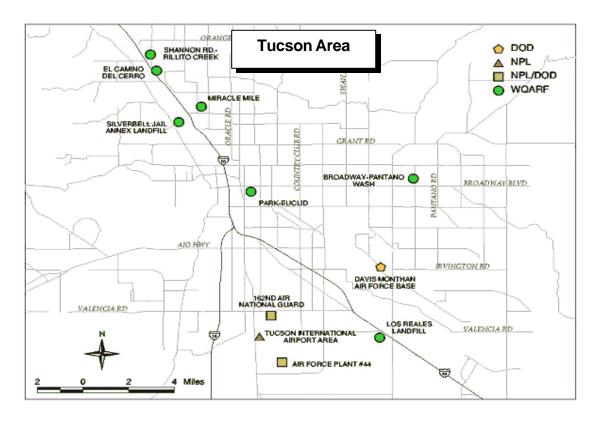
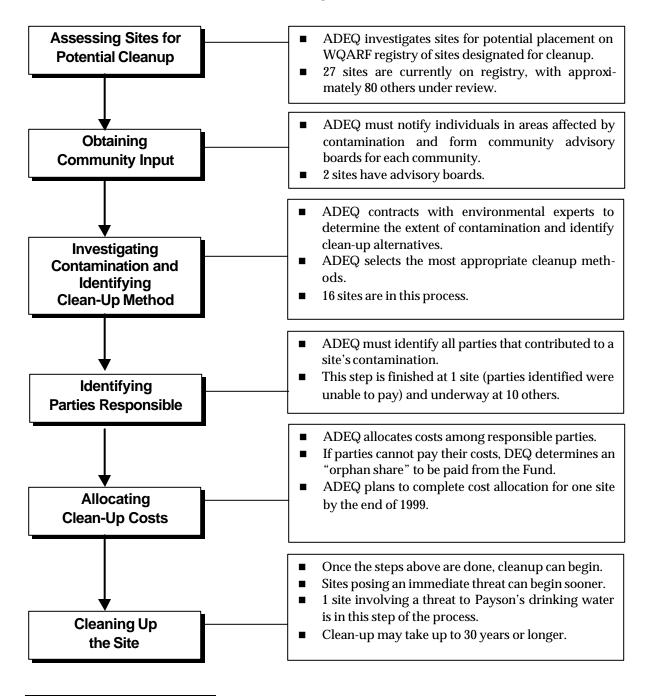


Figure 2

Arizona Department of Environmental Quality Restructured WQARF Process for Cleaning Up Contaminated Sites And Current Status of Sites in Process As of August 15, 1999



¹ Under the process, some steps may be occurring simultaneously.

Source: Auditor analysis of information obtained from ADEQ.

Program funding—To ensure sufficient resources were available to investigate responsible parties and to pay for "orphan shares," WQARF was statutorily guaranteed \$18 million annually beginning in fiscal year 1998. For fiscal year 1998, a majority of the monies for the program were appropriated from the General Fund. However, starting July 1, 1999, A.R.S. §49-282(B) replaced these General Fund appropriations by allowing WQARF to receive up to \$15 million from corporate income taxes annually. As shown in Table 1 (see page 38), other Fund revenues are received from fines, water use taxes, and various license and registration fees. These other revenues total approximately \$3 million each year.

Table 1

Arizona Department of Environmental Quality Water Quality Assurance Revolving Fund Statement of Revenues, Expenditures, and Changes in Fund Balance Years Ended June 30, 1997, 1998, and 1999 (Unaudited)

,	1997	1998	1999
Revenues:			
State General Fund appropriations 1	\$1,705,000	\$14,523,300	\$14,523,300
Fines and forfeits ²	2,144,284	1,942,163	3,305,261
Water use taxes ³	1,909,981	1,891,072	1,957,725
Charges for services 4	1,172,452	1,336,345	1,681,409
Interest on investments	71,190	72,687	629,329 5
Licenses, fees, and permits	25,687		3,145
Total revenues	7,028,594	19,765,567	22,100,169
Expenditures:			
Personal services	1,532,298	1,733,899	2,117,979
Employee related	286,464	319,831	380,223
Professional and outside services ⁶	3,624,151	5,839,457	8,789,666
Travel, in-state	68,078	51,326	53,885
Travel, out-of-state	7,044	17,787	20,062
Aid to organizations			15,226
Other operating	146,969	264,861	309,511
Capital outlay	104,415	65,821	
Allocated costs 7	816,773	1,084,476	1,234,511
Total expenditures	6,586,192	9,377,458	12,921,063
Excess of revenues over expenditures	442,402	10,388,109	9,179,106
Net operating transfers in (out) ⁸	24,588	(800,000)	(800,000)
Excess of revenues and transfers in over expenditures and transfers out	466,990	9,588,109	8,379,106
Fund balance, beginning of year	7,444,280	7,911,270	17,499,379
Fund balance, end of year	<u>\$7,911,270</u>	<u>\$17,499,379</u>	<u>\$25,878,485</u> 9

Includes an increase of \$12.7 million in 1998 and to pay for personnel, legal support, and costs associated with searching for responsible parties and to contract for cleanup at priority sites where no responsible party could be found.

Source: The Arizona Financial Information System *Revenues and Expenditures by Fund, Program, Organization, and Object* report and *Trial Balance by Fund* report; and *State of Arizona Appropriations Report* for the years ended June 30, 1997, 1998, and 1999.

² Remedial action costs recovered from responsible parties.

³ Assessed on businesses operating municipal water delivery systems in accordance with A.R.S. §42-5302.

⁴ Includes fees for prospective purchaser agreements, water quality assurances, fertilizer licenses, and manifest resubmittals, and for hazardous waste facility, hazardous waste resource recovery facility, industrial discharge, and pesticide registrations.

⁵ Since the Department received additional State General Fund appropriations for priority site cleanup in 1998, the monies available for investing have increased nearly \$18 million. Consequently, investment earnings increased significantly between 1998 and 1999.

Includes approximately \$1.3 million, \$3.9 million, and \$6.1 million expended for priority site cleanup in 1997, 1998, and 1999, respectively.

Amount is the portion of Department-wide overhead expenditures allocated to the Water Quality Assurance Revolving Fund, such as administrative personnel, rent, general accounting, telecommunications systems, and risk management costs.

Beginning in 1998, A.R.S. §49-282 requires the Department to transfer \$800,000 from the Water Quality Assurance Revolving Fund to the Arizona Water Quality Fund administered by the Arizona Department of Water Resources.

Includes \$2.6 million reserved for a long-term loan to the Tucson Regional Airport, and the remaining \$23.3 million designated for priority site cleanup expenditures and program operating expenditures.

FINDING I

CHANGE IN LIABILITY APPROACH PRESENTS UNIQUE CHALLENGES TO WQARF PROGRAM

The WQARF program is still in the process of adjusting to a significant restructuring made by the Legislature in 1997. Under this restructuring, WQARF can no longer identify a single party who contributed to pollution at a site and hold that party responsible. It must now use its best efforts to identify all contributing parties, allocate responsibility proportionately among them, and determine each party's ability to pay. Although the program is now considered more equitable, its implementation poses challenges for WQARF that are not shared by the Federal Superfund and most other states. Because Arizona's program is new, it is still too early to assess the long-term effect of these changes.

WQARF Restructured in 1997

In 1997, WQARF was restructured to create a more equitable and workable state superfund. Prior to 1997, WQARF's joint liability standard was largely viewed as inequitable by the regulated community. Under joint liability, WQARF could hold a single party responsible for all cleanup costs at a site, even though multiple parties may have contributed to the contamination. This usually meant WQARF would seek to recover cleanup costs from only the parties that were the largest and most obviously able to pay, leaving these parties to recover their cleanup costs from other responsible parties. It was this aspect of joint liability, which shifts the burden of investigating and proving liability from the State to the first-identified parties, that drew the most criticism.

The restructuring efforts also resulted from concerns about the lack of dedicated funding. Before fiscal year 1998, revenues available to the program were inconsistent from year to year. For example, in fiscal year 1994, no General Fund monies were appropriated for WQARF cleanup activities. In fiscal year 1995,

Restructuring increased WQARF's responsibilities and funding.

General Fund appropriations were approximately \$900,000; and in fiscal year 1996 they totaled approximately \$1.5 million. These inconsistencies in funding hampered cleanup efforts because the WQARF program lacked the resources necessary to begin cleaning up contaminated sites prior to determining whether cost recovery was possible.

The 1997 changes were designed to address both issues. The restructured WQARF program now operates under a different liability standard, described in more detail below, and receives annual dedicated funding of \$18 million.

Proportional Liability Poses New Challenges to WQARF

The switch to a new liability standard, called proportional liability, places new challenges on ADEQ. Instead of holding one party responsible for a site's entire cleanup cost, ADEQ must conduct comprehensive historical searches to identify all responsible parties. ADEQ must then determine each party's proportional share of cleanup costs, and pay the shares of those parties who are no longer financially viable.

ADEQ must identify all responsible parties—The change to proportional liability has substantially increased ADEQ's duties for investigating parties potentially responsible for site contamination. A.R.S. §49-287.02 requires ADEQ to use its "best efforts" to identify all persons who may be responsible, regardless of when the contamination occurred. Because of the "best efforts" requirement, ADEQ must identify hundreds of potentially responsible owners and operators of contaminated property, searching back to when the property was undeveloped wilderness. ADEQ must do this regardless of the parties' financial viability or continued existence. In one case, this meant researching back to pre-statehood times to determine ownership.

ADEQ must proportionally allocate responsibility—Once all responsible parties are identified, and a cleanup remedy is selected, ADEQ faces the additional challenge of allocating shares of cleanup costs. For example, if ADEQ determined a party was responsible for 40 percent of a site's contamination, ADEQ would hold that party responsible for 40 percent of cleanup

There may be hundreds of potentially responsible parties.

costs. Determining the amount of contamination each party caused could be very difficult, and representatives from the EPA stated that it may be impossible at some sites, such as landfills or sites where multiple contamination plumes run together.

Landfills—Determining responsible parties at landfills is very difficult. Prior to federal regulations in 1980, industries dumping hazardous materials in municipal landfills did not keep records of the materials, or the quantities dumped.

Co-mingled Plumes—Several hundred parties may have contributed to contamination at one co-mingled plume in central Phoenix.

WQARF's share of cleanup costs could be **substantial**—Even after ADEQ completes the investigations and allocation. WQARF's share of cleanup costs could be substantial. According to ADEQ, for the \$18 million annual funding to be adequate, WQARF's share of cleanup costs must not exceed 35 percent. However, when responsible parties cooperate and agree to the allocation, statute guarantees a 25 percent discount, leaving little money for "orphan shares," those portions of cleanup costs assigned to parties that no longer exist or are unable to pay, and must therefore be paid by WQARF. Parties may be unable to pay

for various reasons. Contamination at some WQARF sites α -curred in the 1940s or earlier, and many parties responsible for such contamination have been defunct or deceased for several years. Others still exist but may be unable to pay their full share or may become financially unviable during the life of the cleanup project. Projects can last for 30 years or more and cost tens of millions of dollars. So far, ADEQ estimates that cleanup at 10 of the 27 registry sites will be completely or significantly funded by WQARF.

Additional Time and Resources Required

Although the restructured investigation and allocation processes have helped resolve inequities, these additional requirements are time-consuming and may contribute to further cleanup delays and increased costs. In particular, searches for potentially responsible parties can be very time-consuming and difficult. Additionally, proportional allocations may also increase time and costs, delay cleanup, and may raise new equity questions from small businesses, according to a study begun in 1995 by the En-

vironmental Protection Agency, which administers the Superfund at the federal level. To expedite searches and allocations, ADEQ hired more full-time investigators. It also has hired a contractor to conduct the investigation and allocation phases of the process for one site.

The investigation at one site could take ten years.

Delays caused by lengthy investigations allow plumes to spread—Lengthy searches for responsible parties may further delay cleanup efforts and increase the costs, as untreated contamination continually leaches into previously uncontaminated soil and groundwater. Environmental experts have stated that investigating a single party may take 18 months or longer and cost thousands of dollars. Although an investigator can research between 5 and 10 parties at once, some sites have several hundred parties to investigate. One site investigation began with as many as 1,000 potentially responsible parties. ADEQ estimates that the investigation at that site could take as long as 10 years, and that a plume of contamination already 12 miles long could spread another half mile during that time.

Historically, searching for responsible parties has been difficult and time-consuming for two main reasons.

- **First**, witness interviews in historical searches are difficult as witnesses may have moved or are deceased. Many may have forgotten relevant details, and some may also feel loyalty to past employers and be hesitant to reveal information.
- **Second**, many records are not available for businesses that no longer exist, and businesses still in operation may routinely purge documents after a few years. Other records may be destroyed if a business suspects it may become the subject of a search. Further, some types of records were never even kept. For example, hazardous waste records were not required in Arizona prior to 1984.

EPA studied proportional liability—Although the EPA operates under joint liability, it did study proportional liability in a pilot study at nine federal Superfund sites and encountered some of the same difficulties Arizona faces. Specifically, the EPA found

that the allocation process was lengthy, expensive, and delayed the progress of site cleanup. Additionally, several smaller businesses felt the process was neither fair nor cost-effective.

- Difficult and time-consuming allocations—The proportional allocation of cleanup costs took much longer than expected because any party could undermine the entire process by treating the allocation as litigation. At several sites, parties made numerous requests for information, and requested depositions. There were also instances where nearly all parties sought settlement, but a single party insisted that the EPA complete the allocation. According to the EPA, the allocation process may increase, not decrease, costs for all parties.
- **Delayed cleanup**—The time needed for investigations and the allocation process hindered cleanup progress because parties wanted to know their share of cleanup costs before they would commit to performing the work.
- Some equity issues persisted—While several parties felt their allocation was fair considering the available information, others felt their share was not fair because major corporations with greater resources were better able to influence the allocation. Additionally, several small businesses said that the costs of protecting their interests in the allocation process may actually be higher than litigation.

ADEQ's efforts to improve search progress—Little progress was made in responsible party searches prior to 1997, but with its increased funding, ADEQ has taken steps to move the process forward. ADEQ increased investigator salaries, which made investigators easier to hire and retain. Since May 1999, ADEQ has had four full-time investigators. ADEQ also has an agreement with the Arizona Attorney General's Office, which has hired three full-time investigators. Additionally, ADEQ hired a contractor in June 1999 to identify responsible parties and allocate cleanup costs to those parties for one registry site. ADEQ hopes to complete the searches and allocation for that site by April 2000. Depending upon this site's outcome, ADEQ may consider using contractors at other sites for responsible party searches, allocations, or other specialized assistance with activities such as title searches.

Other States' Liability Standards Differ from Arizona's

To determine if the experience of other states could provide any insight into what ADEQ is likely to encounter as it moves through this process, Auditor General staff examined how other states with superfunds established liability. However, Arizona's standard turns out to be largely unique in the way it applies proportional liability. Most states operate under joint liability or a more flexible version of proportional liability. According to the Environmental Law Institute's 50-state study of state superfund programs in 1998, 36 states operate under joint liability. Eleven of those states may use proportional liability when appropriate.

Arizona is one of only five states that specify proportional liability as its standard. Of those states, Alabama, California, and Tennessee have more flexibility in their administration of proportional liability.¹ For example:

- **Alabama** attempts to limit its role to overseeing cleanup efforts. It encourages all parties to negotiate settlements. If necessary, Alabama would conduct a proportional allocation, but has not had to do so. When parties are uncooperative, Alabama refers the site to the EPA, which would pursue the parties jointly.
- California cannot hold parties liable for contamination that occurred prior to the program's creation in 1982.² This significantly limits the number of potentially responsible parties it must investigate. It prepares a non-binding allocation designed to initiate settlements among cooperative parties. Uncooperative parties are pursued under joint liability. Many states pursue parties under federal joint liability provisions outlined in the Comprehensive Environmental Response,

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Utah's Superfund also specifies proportional liability as its liability standard, but it is not yet fully implemented.

California's Superfund was allowed to sunset in January 1999 because the California State Assembly could not agree on specific details of the program's renewal. Representatives of California's program expect it to be renewed with proportional liability similar to how it previously functioned.

Compensation, and Liability Act (CERCLA). A.R.S. §49-287(B) prohibits ADEQ from pursuing parties jointly under CERCLA.

■ **Tennessee** facilitates settlements among responsible parties, but allocation may be used if parties are unable to settle. A representative of Tennessee's Superfund said businesses prefer to settle among themselves, rather than having the state dictate an allocation to them. Tennessee also has the option to pursue parties under joint liability.

Too Early to Judge Full Effect of Changes

For several reasons, it is too early to determine the full effect of the 1997 restructuring. The revised program has been in place for a relatively short time, and not enough progress has been made toward site cleanup to assess effectiveness. In addition, the way ADEQ performs some steps may also change as it continues to work with the new proportional liability standard. Since the program was restructured, ADEQ has identified 27 sites needing remediation and has placed them on the WQARF Site Registry. Through the voluntary cleanup program, ADEQ staff is also providing technical support for and monitoring of cleanup efforts at an additional 13 sites. Currently, ADEQ is considering approximately 80 other sites for potential placement on the registry and it estimates that there could be hundreds of other sites that may eventually require investigation.



UNDERGROUND STORAGE TANK PROGRAM



INTRODUCTION AND BACKGROUND

The Underground Storage Tank (UST) program was established in 1986 to reduce the risk that leaking underground storage tanks pose to human health and the environment through soil, surface water, and groundwater contamination. However, unlike WQARF, UST's cleanup responsibilities are limited to substances such as gasoline, aviation and diesel fuel, and petroleum solvents that have leaked from underground storage tanks. In addition, UST provides financial assistance to the owners/operators of these leaking tanks through the State Assurance Fund (SAF). Financial assistance for site cleanup is provided regardless of the owner/operator's ability to pay.

Cleanup process for leaking underground storage tank sites—For an owner/operator to obtain financial assistance to investigate and clean up a leaking underground storage tank site, a number of steps must typically be completed. Eligible owner/operators who have incurred cleanup costs can submit applications for reimbursement. Owners/operators seeking ADEQ's preapproval of investigative and/or cleanup work submit applications that include site characterization plans detailing the work required to define the extent of contamination and/or work required to clean up the site. ADEQ reviews and approves the work plans and, when money is available, sets it aside to pay for 90 percent of eligible costs.

Program funding and staffing—Since 1990, the State Assurance Fund has paid approximately \$118.6 million toward cleaning up 2,564 contaminated sites. Revenues for the Fund total approximately \$28 million each year, generated mainly through a one-cent-per-gallon tax on substances such as gasoline, which are stored in underground tanks (see Table 2, page 50). This level of revenue is not sufficient to pay all claims for reimbursement of cleanup costs. At the end of fiscal year 1999, approved but unpaid claims totaled more than \$55 million.

The Fund also pays the program's administrative costs. In fiscal year 1999, approximately 24 percent of Fund monies (\$6.73 million) were spent on administrative costs, including salaries for

Since 1990, the SAF has paid \$118.6 million to clean up contaminated sites.

Arizona Department of Environmental Quality
State Assurance Fund
Statement of Revenues, Expenditures, and Changes in Fund Balance
Years Ended June 30, 1997, 1998, and 1999
(Unaudited)

Table 2

	1997	1998	1999
Revenues:			
Underground storage tank contents tax	\$23,061,796	\$25,315,091	\$26,317,605
State General Fund appropriations 1	3,000,000	1,578,000	
Interest on investments	1,308,747	1,588,600	1,633,528
Other		18,288	34,571
Total revenues	27,370,543	28,499,979	27,985,704
Expenditures:			
Personal services	1,811,663	1,918,330	2,398,915
Employee related	345,006	371,777	457,588
Professional and outside services	6,452,804	3,694,484	3,088,057
Travel, in-state	24,981	23,843	25,574
Travel, out-of-state	9,175	6,029	3,473
Aid to individuals and organizations ²	20,204,306	18,218,348	20,588,650
Other operating	89,053	253,253	233,777
Capital outlay	52,742		
Allocated costs ³	1,001,536	1,207,842	1,406,949
Total expenditures	29,991,266	25,693,906	28,202,983
Excess of revenues over (under) expenditures	(2,620,723)	2,806,073	(217,279)
Fund balance, beginning of year	35,504,947	32,884,224	35,690,297
Fund balance, end of year	<u>\$32,884,224</u>	<u>\$35,690,297</u>	\$35,473,018 ⁴

¹ Includes amounts to reimburse storage tank owners/operators for leaking underground tank cleanup costs.

Source: The Arizona Financial Information System *Revenues and Expenditures by Fund, Program, Organization, and Object* report and *Trial Balance by Fund* report; and the *State of Arizona Appropriations Report* for the years ended June 30, 1997, 1998, and 1999.

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² Reimbursements for leaking underground storage tank cleanup costs to owners/operators.

³ Amount is the portion of Department-wide overhead expenditures allocated to the State Assurance Fund, such as administrative personnel, rent, general accounting telecommunications system, and risk management costs.

Includes \$5.4 million reserved for a long-term loan to the Regional Public Transportation Authority, and the remaining \$30.1 million designated for payments to claimants for clean-up costs and program operating expenditures.

most of the program's 83 FTE. These staff review and approve plans for cleanup, monitor cleanup efforts, and take action against tank owners who fail to take appropriate cleanup measures. They also oversee the cleanup of sites where the tank owner is unknown or is unwilling or incapable of leading the cleanup effort.



FINDING I

CONTINUED EFFORTS NEEDED TO ADDRESS EFFICIENCY AND FUNDING ISSUES IN THE UNDERGROUND STORAGE TANK PROGRAM

The UST program has made progress in improving its performance since a 1998 Auditor General performance audit, but continued work is needed. ADEQ has become more efficient in handling leaking underground storage tank cases, reducing a substantial backlog of plans for addressing sites that need cleanup. However, improvements are still needed in the program's computer database for tracking sites. Action is also needed to address the lack of funding available for approved cleanups. Finally, ADEQ has recently proposed rules that would enable it to focus limited resources on cleaning up sites that pose the greatest danger to the public; however, these rules are not expected to be in place until May 2000.

1998 Performance Audit Identified Concerns in Several Areas

In 1998, the Auditor General completed a performance audit of the Underground Storage Tank program that identified a number of concerns related to program management and the program's future (Report No. 98-4). These concerns covered the following areas:

■ Backlog of work and insufficient management information—At the time of the audit, the UST program had accumulated a large number of site characterization reports that were awaiting approval. These reports are critical since they help ensure that appropriate steps will be taken to clean up the leak. ADEQ also had a backlog of other review work. Adding to the problem, the program's management information was incomplete and inaccurate.

Finding I UST Program

■ Need for action on funding options—ADEQ lacked sufficient monies to meet all of its obligations for providing financial assistance to help clean up leaks. The audit outlined a number of recommendations, including funding increases, reducing the expenses the State Assurance Fund would support, terminating the Fund, and reducing administrative expenditures from the Fund.

■ Need for a risk-based approach to setting priorities— ADEQ had no rules that would allow it to stretch scarce cleanup dollars by focusing resources on those sites that pose the greatest risk to the public and the environment.

Program Has Increased Efficiency, but Management Information Needs Attention

ADEQ has made progress implementing 1998 audit recommendations to improve its efficiency in handling leaking underground storage tank cases. According to ADEQ data, the number of site characterization reports awaiting ADEQ approval is down from 756 in October 1997 to 124 in August 1999. Of the 124, 96 have been awaiting approval for 120 or more days. In addition, the number of closure requests awaiting review has declined from 900 in October 1997 to 79 in August 1999. Of these 79, 54 have been awaiting review for 120 or more days. ADEQ also now monitors staff productivity and has developed a staff training program and a guidance manual to help ensure that staff provide consistent direction to owners/operators and consultants.

However, additional work is needed to improve the program's management information. The 1998 audit report found problems with the information used to track leaking underground storage sites and recommended that ADEQ ensure that its database (called USTracks) is complete and accurate. Although ADEQ initially said it would complete this process by January 1999, as of September 1999 it indicated it had corrected 62 percent of the data and did not know how much time would be needed to correct the rest. The 1998 audit also recommended that the program develop and use management reports that track case status, backlogs, and timeliness of all process steps. While the

Finding I UST Program

system has the capability of producing such reports, computer programming has still not been completed to make the reports easily generated and readily available to management.

Action Still Needed to Address State Assurance Fund Problems

In 1998, the State Assurance Fund did not have sufficient monies to pay millions of dollars in approved claims for cleanup costs. The 1998 report analyzed several ways to address the issue: increasing revenues, limiting claims, eliminating the Fund, and finding ways to reduce administrative expenses from the Fund.

- Revenues have not increased and the backlog of approved but unpaid claims is now more than \$55 million.
- Assurance Fund has not increased and the backlog of unpaid claims has grown. Approved but unpaid claims totaled more than \$55 million at the end of fiscal year 1999, compared with \$48 million in October 1997. At the end of fiscal year 1999, the Fund also had 541 pending claims requesting more than \$22 million. The excise tax remains unchanged at one-cent-pergallon on substances stored in underground tanks. In addition, General Fund appropriations actually declined between fiscal years 1997 and 1998 and there was no appropriation in the 1999 fiscal year. However, the Legislature did appropriate \$1.8 million for the Fund for fiscal years 2000 and 2001.
- Reducing future claims—Although one statutory change has been made since 1998 to reduce the amount the State Assurance Fund would contribute toward cleaning up a site, other changes that were also made may have the opposite effect. The 1998 audit recommended increasing the copayment amounts that owners/operators must pay toward cleanup. Since the 1998 report, A.R.S. §49-1054(A) was amended to increase the owners/operators' copayment from 10 to 50 percent of cleanup costs for releases reported after June 30, 2000.¹ However, amendments to A.R.S. §49-1052 require the Fund to pay for activities that were previously ineligible for reimbursement, such as soil sampling, analyses and reporting ac-

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The increased copay applies to tanks that had not been closed or upgraded to comply with new federal standards.

Finding I UST Program

tivities. Additionally, other modifications made more owners/operators likely to qualify for \$1 million in assistance from the State Assurance Fund rather than \$500,000.

- Terminating the Fund—No action has been taken yet to terminate the Fund. The 1998 audit reported that continuing the State Assurance Fund was an unnecessary cost to the State because affordable private insurance existed. The Legislature has since allocated funding for a study on the extent and type of groundwater contamination from leaking underground storage tanks, and the findings could be used to help determine the Fund's future. One factor that may be addressed in the study is the extent of MTBE contamination. MTBE is a gasoline additive designed to reduce air pollution.
- Reducing administrative expenses—ADEQ has taken action to reduce its administrative costs since the previous audit. In fiscal year 1997, administrative expenditures accounted for 32.6 percent of total fund expenditures. (ADEQ estimated that if it had been able to pay all approved claims, administrative expenses would have been 12 percent.) To reduce administrative costs, the Fund has assumed tasks previously administered by a contractor, such as technical claims reviews and the appeals process. In fiscal year 1999, the program's administrative costs were 24 percent, and ADEQ estimates that its administrative costs would have been below 10 percent if it had been able to pay all claims that it approved that year. ADEQ will need to continue to improve efficiency as A.R.S. §49-1051(B) requires the program to limit its administrative costs to the greater of 21 percent, or approximately \$5.7 million, by July 1, 2002.

Administrative expenses have declined since 1997.

ADEQ Should Continue to Implement Risk-Based Approach

ADEQ has not yet fully implemented a risk-based approach that would allow it to use its limited resources to clean up leaking underground storage tank sites posing the greatest threat to the public, as recommended by the 1998 audit and by the EPA. At the time of the audit, ADEQ required all reported sites to be cleaned up to meet drinking water standards, regardless of their threat to human health. However, by implementing a more

Finding I UST Program

flexible approach, known as Risk-Based Corrective Action (RBCA), ADEQ could determine which sites to clean up first and allow low-risk sites to exceed allowable contamination standards. To implement this approach in Arizona, the audit recommended that ADEQ transfer innovative ideas from other states and use outside technical resources to develop computer software and guidance documents.

During the course of the 1998 audit, ADEQ began developing

Tier 1—Used as a screening device. When contamination is below pre-set standards, no cleanup is required. When contamination exceeds the standards, cleanup can be done or a Tier 2 assessment may be performed.

Tier 2—Sites with higher contamination levels are studied and less conservative cleanup standards are determined depending upon the extent of contaminants, future uses of groundwater, and effects on human health.

Tier 3—Higher-priority sites are subject to more comprehensive evaluation and cleanup.

RBCA rules. As part of the process, ADEQ consulted with other states, the EPA, and other organizations to develop a three-tiered approach designed to more efficiently use its cleanup resources. A.R.S. §49-1005(F) requires ADEQ to adopt these rules by December 31, 1999. ADEQ has recently proposed RBCA rules but does not expect them to be in place until May 2000. In

anticipation of implementing RBCA, ADEQ has purchased a computer model to track sites through the three-tiered process and has initiated staff training in the model.

Finding I UST Program

Recommendations

1. ADEQ needs to continue its efforts to ensure that its US-Tracks database is complete and accurate.

- 2. ADEQ also needs to develop and make management information readily available to enable UST managers to track case status, backlogs, and processing timeliness.
- 3. The Legislature should consider increasing the gasoline excise tax or increasing General Fund appropriations to ensure there are sufficient revenues to pay existing claims for cleanup costs.
- 4. ADEQ needs to complete rules to enable it to implement a risk-based approach to cleanup that would stretch its scarce resources and focus on those sites that pose the greatest danger to public health or the environment.

Agency	Response





ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Governor Jane Dee Hull

Jacqueline E. Schafer, Director

November 9, 1999

Debra K. Davenport, Auditor General State of Arizona Office of the Auditor General 2910 North 44th Street, Suite 410 Phoenix, Arizona 85018

Dear Ms. Davenport:

The Department of Environmental Quality appreciates the opportunity to respond to the Performance Audits of three key environmental programs: Aquifer Protection Permits, Underground Storage Tanks, and the Water Quality Assurance Revolving Fund (WQARF). We recognize the significant amount of work the Audit General's staff has done in preparing these audits. We know that these environmental programs are complex and their legislative and administrative histories complicated.

In the last performance review, we were told we needed to do more in the way of productivity, employee training, financial management, and worker retention. We have worked very hard over the past two years to accomplish those things. We realize we have more work to do. We have, however, improved and made progress and appreciate the acknowledgment of these improvements in the report.

While we do not agree with all of the remarks made in the report, the inclusion of our enclosed responses will allow the reader of the report the opportunity to come to a reasonable conclusion regarding the status of these programs. We appreciate the opportunity to have our comments included in the final report.

Thank you again for the efforts of your staff in our efforts to improve the performance of the department.

Sincerely,

Jacqueline E. Schafer, Director

Arizona Department of Environmental Quality

Enclosure

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AQUIFER PROTECTION PERMIT (APP) PROGRAM

FINDING I. COMPLIANCE WITH STATUTORY APP PROCESSING DEADLINES IS DOUBTFUL

Recommendation #1. ADEQ should continue working to upgrade professional positions within the APP program as it sees necessary.

ADEQ Response: The finding of the Auditor General is not agreed to, but the recommendation will be implemented.

The issue of low paid technical staff positions is a longstanding one. It has been recognized by the Legislature and Administration and, this year, in a Department of Administration "Compensation Proposal for FY2000-FY2001," it is addressed again. ADEQ is working, within its capability, to upgrade the positions. Despite this problem, the Department disagrees that its ability to meet our APP processing deadline is at risk. Through improved training, program enhancements, detailed project management, and innovative staffing, the Department is confident that it will manage the required approximately 100 permit actions needed each year for the next four years.

Recommendation #2. ADEQ needs to develop and implement a formal training process for staff who process aquifer protection permits to help ensure that permits are processed efficiently and consistently.

ADEQ Response: The finding of the Auditor General is not agreed to, but the recommendation will be implemented.

The report suggests that the Department did nothing to improve training for its staff in the APP program, essentially ignoring the recommendations of the 1993 program audit. This is incorrect. Many formal and informal training efforts have been implemented notwithstanding the limited training budget which has plagued the program for most of its lifetime. Training has been focused on two tracks: 1) technical decision-making and 2) permitting processes. Numerous efforts have been provided to guide staff along technical decision-making processes. One such effort is the monthly meeting of Water Permits hydrologists which is much more than an informal mentoring effort. Each month the program hydrologists, led by the most senior hydrologist in the Department, focus on hydrologic issues of specific projects which are "stumping" the permit team. The group works through the problems and analyzes solutions. These monthly meetings serve many training purposes: hydrologists continue training in methodology and analysis with specific case studies relevant to their daily work; they explore current issues in hydrology; and discuss consistency in presenting their findings. Additionally, the Water Permits Section has taken advantage of several training courses offered by the Environmental Protection Agency or other outside vendors, including "Hydrology for Non-Hydrologists" for those project officers and engineers who are not trained as hydrologists and seminars on liner technologies and acid-mine drainage. Along the line of permitting process training, in addition to the individual mentoring and the development of the permitting process

flowchart, the Permits Section management also created "how to" templates for project officers to use in areas ranging from "How to Write a Memo" to issue tracking and project management. These resources and similar materials are compiled in the "Ready Reference" Filing System available to all staff. Specific software has been purchased to assist with workload tracking (i.e. Microsoft Project) and formal training has been offered to staff. The Department is developing a plan focused on skill, knowledge and abilities (SKA). Skill is focussed on applicable law/rules, program processes and project management. Knowledge is based upon the education/training which qualifies a person for the position along with continuous education depending on the job requirements. Abilities include technical writing, public speaking, team building and negotiations.

More can always be done to improve training, and a formal training program, provided adequate funding, would certainly help. The Department accepts the recommendation that a formal training program will help the APP program improve and plans to finalize the "SKA" outline for APP permitting staff within the next two months. The Department does not agree that it has done nothing since 1993 to implement formal and informal training to help staff. The Department does not agree that the lack of a formal training program will prevent the Department from meeting the statutory requirement for issuing permits.

Recommendation #3. ADEQ management needs to develop and implement a plan for addressing aquifer protection permits in process to ensure timely issuance of permits that are not subject to statutory penalties.

ADEQ Response: The finding of the Auditor General is not agreed to, but the recommendation will be implemented.

The Department does not disagree that it will need to process approximately 100 permits during each of the next 4½ years to meet the 2004 deadline. We strongly disagree with the Auditor General's calculations of our past performance. The authorizing legislation for the APP program specifies the following permit actions: 1) issuance of an individual permit, 2) major modification to an existing permit, and 3) clean closure of a facility in lieu of issuing an APP. When all of these actions are counted, the correct assessment of Department productivity in the APP program is that it issued 88 APP permit actions in FY1998 and 104 APP permit actions in FY1999. Based on that progress, with no other change, the Department would be able to meet the anticipated number of permit actions by 2004. But as the Auditor General knows, the Department will have its rules in place by January 1, 2001 for the Unified Water Quality Permit (UWQP) program. Current discussions with stakeholders indicate that the UWQP rule could include as many as 20 categories of general permits, eliminating the need for an individual APP for entire classes of facilities. The Department believes that the additional general permits will significantly reduce the number of facilities required to obtain individual APPs.

The combination of additional general permits, decisions to deny applications (when appropriate), implementation of permitting process efficiencies and continued staff training will provide more than enough time to complete the required permitting prior to the deadlines.

APP FINDING II: ADEQ HAS NOT FOCUSED AQUIFER PROTECTION PERMIT EFFORTS ON HIGH-RISK FACILITIES

Recommendation. ADEQ needs to take prompt action to address those facilities that have failed to respond to the Department's requests to submit APP applications, and it should initiate this action beginning with highest-risk/highest-priority facilities.

ADEQ Response: The finding of the Auditor General is not agreed to, but the recommendation will be implemented.

The Department disagrees with the conclusion that the Department failed to protect either public health or the environment by somehow not working on permits for facilities posing the highest risk to groundwater. Existing groundwater permits issued by the Department of Health Services prior to the creation of the Department in 1986, and by ADEO prior to the effective date of the APP program, serve to adequately protect groundwater until the more protective APP can be issued. It is a mistake to assume that facilities with these legacy permits are polluting our groundwater supplies while they wait for an APP permit, and that as a result of not having the APP, public health and the environment are somehow at risk. Groundwater Quality Protection Permits (GWQPP) as a rule require discharge limits, monitoring and reporting. For facilities operating under a Notice of Disposal (NOD), the Department has maintained an aggressive inspection and compliance program. In fact since 1997, the Department has entered into approximately 50 compliance and enforcement actions for GWQPP facilities and 100 compliance and enforcement actions for NOD facilities. These actions made up 64% of all the compliance and enforcement actions from 1997 to the present. While we agree with the Auditor General that the APP is a more protective and desired permit, we disagree that the Department has somehow been negligent in its duty by requiring additional time to issue APP permits for the 1,071 existing facilities with legacy permits transferred to the Department at its creation.

When the Legislature passed A.R.S. §49-241.D, it specifically included two factors for prioritizing the Call-In list: the degree of risk <u>and</u> a workplan by the director designed to process all applications by the appointed time. The director clearly has the authority for his/her work plan to reflect the availability of staff expertise to accomplish both timely permitting and a comprehensive effort to process the entire list. While it is true that new, inexperienced staff were not given high-risk facilities to work on, the high risk facilities were processed in as expeditious a manner as staffing would allow.

As well, the Auditor General is critical that ADEQ did not refer non-responders to compliance per ADEQ policy. The Department opted to work with facilities to encourage and coach them through the application process. Perhaps these facilities would have been better served if the Water Permits Section has referred them to the Water Quality Compliance Section. Regulatory reform through the Licensing Time Frames provisions now precludes the Department from providing this level of assistance. After August 13, 1999, existing facilities who are unable to submit a complete application according to the specified timeframes will be automatically referred to the Water Compliance Section.

APP FINDING III: INCOMPLETE AND INACCURATE DATA LIMITS ADEQ'S ABILITY TO MANAGE ITS AQUIFER PROTECTION PERMIT PROGRAM

Recommendation. ADEQ should take the following steps to ensure the data in its databases is accurate and complete enough to manage the Aquifer Protection Permit Program:

1. For the Water Permits and Certification Tracking Database, developing and implementing a plan for cleaning up information already entered into the database and a process for monitoring and verifying the accuracy and completeness of information entered in the future.

ADEQ Response: The finding of the Auditor General is agreed to and a different method of dealing with the finding will be implemented.

The Department has submitted a request for funding construction of a new Permits database as a Critical Issue in the Supplemental Budget process for FY2000-2001. If funding is received, we will proceed on a parallel path to clean existing data while constructing a new database to ensure that when historic data is transferred to the new application, it is accurate. If funding is not received, the Department will approach construction of a new Permits database in smaller segments, and will focus only on new data; historic data will not be transferred. Either method will ensure that only accurate data are contained within the new database. Adequate controls will be included in either approach to ensure data are entered, and entered correctly.

2. For the Licensing Timeframe Database, developing and utilizing management reports to determine whether staff are entering complete data in a timely manner; and developing procedures for verifying the accuracy of this data.

ADEQ Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

APP FINDING IV: ADEQ NEEDS TO TAKE APPROPRIATE STEPS TO HELP ENSURE APP PROGRAM IS ADEQUATELY FUNDED

Recommendation. ADEQ needs to use more appropriate means for ensuring adequate funding for its Water Permits Section, which includes the APP program, by:

1. Billing facilities for work done throughout the permit process once the total charge exceeds the initial application fee collected;

- 2. Revising its budgeting assumptions to better reflect the actual costs of operating the Water Permits Section. As part of this process, the types of recoverable charges as well as the hourly fee rate should be reassessed and ADEQ should modify its administrative rules accordingly;
- 3. Establishing productivity standards for professional staff who are responsible for issuing permits and monitoring their productivity; and,
- 4. Identifying reasonable and actual costs for permitting facilities that may require long review time, multiple permits, and/or several potential modifications to permits in the future and, if necessary, develop recommendations to the Legislature for changing statutory fee caps.

ADEQ Response: The finding of the Auditor General is not agreed to, but the recommendation will be implemented.

The Auditor General has exaggerated the significance of the fee cap waiver. The Department has been plagued with an inadequate fee structure for several years. In FY1998, in an attempt to balance its budget, the Department asked the mining sector, which historically has paid less than it costs to permit its facilities, to agree to waive statutory fee caps in order to recover more of ADEQ's costs to permit those facilities. While legal and initiated for good cause, the Department soon recognized, several months later, that this request could have the appearance of being inappropriate. As a result, it stopped this action in FY1999.

As the Auditor General well knows, the Department convened a stakeholder process to revise its Fee Rule in April 1999. Since that time, the Program has: benchmarked APP fees with other states, analyzed our efficiencies for reasonableness, and opened a docket for a rule revision.

As of November 9, 1999, the Department is developing scenarios to show how various revisions to the Fee Rule (increase the types of recoverable services, incremental increases in the hourly rate as well as implementation of permitting efficiencies) would impact the funding shortfall. The Department will continue meeting with Stakeholders to obtain feedback prior to any proposed rule changes. Based upon the current rulemaking schedule, revisions to the Fee Rule should be proposed by April, 2000.

WATER QUALITY ASSURANCE REVOLVING FUND (WQARF)

FINDING I. CHANGE IN LIABILITY APPROACH PRESENTS UNIQUE CHALLENGES TO WQARF PROGRAM

ADEQ Response: The finding of the Auditor General is agreed to, and while no specific

recommendations were provided, ADEQ will continue to explore areas for

improvement.

ADEQ concurs with the report's conclusion that it is, "too early to determine the full effect" of the 1997 changes to the Water Quality Assurance Revolving Fund (WQARF) statute. However, ADEQ does believe "new" WQARF has brought about many positive changes to the traditional Superfund approach, as summarized below:

Unfair Liability Scheme: The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) establishes strict, joint and several liability, without regard to contribution. Prior to 1997, WQARF followed the same liability scheme, which placed the burden on an identified responsible party to prove division of harm. Theoretically, one party could be held responsible for 100% of the costs of cleanup at a multi-party site. This led to significant and expensive litigation, which substantially slowed the cleanups.

The new liability scheme under WQARF, one of "proportional liability", is considered to be more fair. Also, the Legislature provided increased funding to ADEQ for payment of "orphan shares" (shares allocated to parties unable to pay their fair share).

- Impacts to Small Business: CERCLA and "old WQARF" have long been considered as having adverse impacts to small businesses. New WQARF allows ADEQ to settle with small business owners based on their ability to pay.
- Prolonged Impacts to Potentially Responsible Parties (PRPs): CERCLA and "old WQARF" have been criticized for naming PRPs early in the process, and leaving the identified parties in "limbo" for an extended period of time, during the remedial investigation/feasibility study. PRPs are not formally identified in "New WQARF" until the allocation process approaches. Additionally, "New WQARF" provides for PRP no-further action requests and options for early settlement.
- Community Involvement: Stakeholders (which includes ADEQ) felt that more and earlier input from the community on remedy selection is needed, which is a departure from both CERCLA and "old WQARF". Considerable community dissent and concern often resulted in the federal and previous state programs when the community was informed of proposed remedies very late in the process. Extensive community involvement requirements have been built into "new WQARF".

- Cleanup Schedule: CERCLA and WQARF have received extensive criticism about the length of time needed to reach a cleanup decision at sites. Stakeholders felt that protracted negotiations with potentially responsible parties during the remedial investigation (RI) phase of projects contributed to a drawn-out process. "New WQARF" provides increased funding for fund-lead remedial investigations/feasibility studies, to allow site characterization and remedy decisions to progress. Prior to 1997, WQARF funding was inadequate. RIs often took on a "piece meal" approach, where full site characterization would take many years and be funding dependent.
- Study Areas: Prior to 1997, many WQARF sites were identified on Superfund maps as "study areas". This created liability and property value concerns at properties not impacted by contamination. "New WQARF" eliminates the study area concept and requires ADEQ to identify only the areas of known contamination as the "sites".
- Site Listings: Under "old WQARF", there was more than one list of WQARF sites. The Priority List included only sites where fund-lead remedial actions were necessary. The Priority List did not address other sites of significant contamination being addressed by working parties. A WQARF Registry has been created under "new WQARF", which allows all WQARF sites to be viewed and ranked together.
- Cleanup Standards: Both CERCLA and WQARF have historically required ground water cleanups to meet Aquifer Water Quality Standards, without regard to technical feasibility or projected beneficial uses of an aquifer. "New WQARF" requires ADEQ to consider technical practicality and beneficial use.

While the full effect of "new" WQARF cannot be determined at this time, progress has been made. Some of the highlights of the WQARF Program, since the implementation of "new" WQARF, are as follows:

- Establishment of the WQARF Advisory Board and WQARF implementation teams (comprised of ADEQ staff and stakeholders to help fashion rules and guidance) has enabled ADEQ to coordinate more actively with the public on expectations for, and needs of, the agency. The WQARF Advisory Board continues to meet on a monthly basis and offers the public an opportunity to receive information, ask questions and provide comments about the Program. Stakeholder participation is vastly improved over that of "old" WQARF (pre-1997).
- C ADEQ and WQARF Program stakeholders have been working together to draft rules and guidance documents for the new WQARF Program. The interim rule (which addresses significant elements of WQARF, including remedy selection) is expected to be effective by May 2000.
- The creation and continuous updating of the Superfund Programs Section Web page has provided customers with quick and easy access to information related to the Program in general, as well as site-specific information and maps. The Web page, found at http://www.adeq.state.az.us/waste/sps/index.htm, also contains information on upcoming meetings, agendas, and minutes of previous meetings.

- Community Advisory Boards (CABs) have been established at three sites and at least three additional CABs are on schedule to be established by the end of calendar year 1999. The CABs meet at least quarterly to receive information about Registry site status and provide input on activity at Registry sites. CABs provide ADEQ with an effective tool for keeping the public informed and active in the decisions that are being made by the agency.
- The boundaries of the former Priority List sites have been redrawn to more accurately describe the areas of contamination. New maps have been created for all Registry sites. These new maps do not show the old study areas, which included much greater areas than were actually contaminated. These new Registry maps are also used to assist ADEQ in establishing Community Involvement Areas, which determine the addresses that receive fact sheets and notices regarding Registry site activities.
- Early settlements are an option for potentially responsible parties to be able to resolve their liability with ADEQ. Some of these early settlement mechanisms are designed to help small businesses settle their liability based on their ability to pay. To date, fifteen Qualified Business Settlement applications have been received by ADEQ. Eleven of the settlements either have been, or are in process to be, approved by the courts, three are under review by ADEQ, and one was withdrawn. Recently, ADEQ has also reached significant settlements with two other parties, and is negotiating settlement with a third.
- Significant additional funding has been provided to the WQARF Program by the Arizona Legislature. This increase in resources has allowed ADEQ to enter into contracts for full site characterization, according to site priority. Additionally, the funding has allowed ADEQ to continue to implement the necessary early groundwater cleanup actions at the Payson WQARF Registry Site and has facilitated the planning of other upcoming cleanup actions (including a soil cleanup final remedy at the Vulture Mill WQARF Registry site, in Wickenburg, to be implemented beginning in FY2000). In the past, resource limitations and the structure of the WQARF statute necessitated extensive negotiations with potentially responsible parties and enforcement for site work, which had delayed site progress significantly.
- The U.S. Environmental Protection Agency (EPA) is very interested in the Park-Euclid WQARF Registry site, and is considering listing a portion of the site (Mission Linen) on the National Priorities List (NPL). The Governor recently opposed the listing, citing the tools available to "new" WQARF, including a more equitable liability scheme and relief for small business, a substantial increase in resources, flexibility in remedy selection, and enhanced community involvement. The Governor's response has caused EPA to reflect on its proposal to take over the work. As of October 29, 1999, EPA has not yet made a listing decision; however, EPA appears more willing to take a "wait and see" approach.
- With "new" WQARF, as in "old" WQARF, there are working party cleanups being performed. ADEQ encourages working parties at sites, and has been meeting with stakeholders to discuss incentives for parties to perform remedial actions. For example, the current version of the interim rule allows (under certain conditions) parties to receive credit for the work performed, toward future site liability. Presently, private parties are conducting significant cleanup actions at the site which received the highest Eligibility and Evaluation score (site determined to be of greatest risk), Pinal Creek. Other sites undergoing cleanup by working parties include Los Reales Landfill, Silverbell

Landfill, and El Camino del Cerro Landfill, all in Tucson.

Interim remedial actions (requests to ADEQ to protect production wells) and early response actions (primarily source control) are key components of "new" WQARF. To date, ADEQ has received three interim response action requests. One has resulted in a groundwater pump and treat project. The other two are under review. Also, ADEQ is applying settlement money from a facility operator to design and implement a soil and groundwater remedy at the subject facility, which is contributing to area-wide groundwater contamination in Central Phoenix.

UNDERGROUND STORAGE TANK PROGRAM (UST)

FINDING I. CONTINUED EFFORTS NECESSARY TO ADDRESS EFFICIENCY AND FUNDING ISSUES IN THE UNDERGROUND STORAGE TANK PROGRAM

Recommendation #1. ADEQ needs to continue its efforts to ensure that its USTrack database is complete and accurate.

ADEQ Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

UST Program management will continue cleaning up the data in the database. The UST Program has developed a comprehensive plan which will correct the majority of the data cleanup issues within one year.

Recommendation #2. ADEQ also needs to develop and make management information readily available to enable UST managers to track case status, backlogs, and processing timeliness.

ADEQ Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

The UST Program has developed programming necessary to generate the management information reports related to UST case status, backlogs, and processing timeliness. UST Program management will finalize the processes necessary to provide specific information from the USTrack database to ensure that appropriate management information reports are readily available and meaningful. The data entry personnel will work with UST staff designated to coordinate and track the activities of case managers responsible for oversight and maintenance of UST cases. Additionally, the UST Program will continue to track processing times for site characterization report reviews, State Assurance Fund (SAF) reimbursements, and UST closure request reviews.

Recommendation #3. The Legislature should consider increasing the gasoline excise tax or increasing General Fund appropriations to ensure there are sufficient revenues to pay existing claims for cleanup costs.

ADEQ Response: It is not appropriate for the Department to respond to this recommendation since it is not directed to the Department.

Recommendation #4. ADEQ needs to complete rules to enable it to implement a risk-based approach to cleanup that would stretch its scarce resources and focus on those sites that pose the greatest danger to public health or the environment.

ADEQ Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

ADEQ has proposed the UST Release Reporting and Corrective Action Rule which includes provisions for implementing a risk-based corrective action (RBCA) process. The following is the current time line for the rule development:

Rule Development Schedule (tentative)

Rulemaking Activity	<u>Time Frame</u>		<u>Complete</u>			
Final draft rule complete	October 8, 1999		X			
Filed proposed rule w/Sec. of State	October 8, 1999		X			
Formal public comment period starts	November 5, 1999					
Oral proceedings (Flagstaff, Tucson, Phoenix) December 7, 9&10, 1999						
Formal public comment period ends	December 13, 1999					
Revise proposed rule	December 1999					
Director "adopts" rule	December 31, 1999					
GRRC reviews rule	January - May 2000					
Rule filed with Secretary of State	May 2000					

ADEQ currently implements risk-based corrective actions for soil cleanups using the Soil Rule, and encourages risk-based groundwater remediation. Risk-based remedy selection is currently being utilized for groundwater-impacted sites. Once enacted, the UST Release Reporting and Corrective Action Rule will allow us to close groundwater impacted sites based on risk.

The ADEQ will provide training for ADEQ staff and external UST stakeholders on the final rule and RBCA process during January through May 2000. In addition, ADEQ will complete development of risk assessment guidance by May 2000.

Other Performance Audit Reports Issued Within the Last 12 Months

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	mental Disabilities	99-11	Department of Economic Security—
98-19	Personnel Board		Child Support Enforcement
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99-1	Department of Administration,	99-14	Arizona Council for the Hearing
	Human Resources Division		Impaired
99-2	Arizona Air Pollution Control	99-15	Arizona Board of Dental Examiners
	Commission	99-16	Department of Building and
99-3	Home Health Care Regulation		Fire Safety
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99-5	Department of Gaming		Tobacco Education and Prevention
99-6	Department of Health Services—		Program
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99-9	Department of Health Services—		Sunset Factors
	Arizona State Hospital	99-20	Arizona State Board of Accountancy

Future Performance Audit Reports

Arizona Department of Transportation—A+B Contracting
Department of Health Services—Behavioral Health Services Coordination