

PERFORMANCE AUDIT

RADIATION REGULATORY AGENCY

RADIATION REGULATORY
HEARING BOARD

Report to the Arizona Legislature
By the Auditor General
November 1984
84-9



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STATE OF ARIZONA
OFFICE OF THE
AUDITOR GENERAL

November 8, 1984

Members of the Arizona Legislature
The Honorable Bruce Babbitt, Governor
Mr. Charles F. Tedford, Director
Arizona Radiation Regulatory Agency

Transmitted herewith is a report of the Auditor General, A Performance Audit of the Arizona Radiation Regulatory Agency and the Arizona Radiation Regulatory Hearing Board. This report is in response to an April 27, 1983, resolution of the Joint Legislative Oversight Committee. The performance audit was conducted as a part of the Sunset Review set forth in A.R.S. §§41-2351 through 41-2379.

This performance audit report is submitted to the Arizona State Legislature for use in determining whether to continue the Arizona Radiation Regulatory Agency and the Arizona Radiation Regulatory Hearing Board beyond its scheduled termination date of July 1, 1986. The report addresses the efficiency and effectiveness of the Agency's X-ray and radiation materials inspection program, and the adequacy of the Agency's Nuclear Emergency Management Fund financial support.

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

Respectfully submitted,

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Enclosure

SUMMARY

The Office of the Auditor General has conducted a performance audit of the Arizona Radiation Regulatory Agency (ARRA) in response to an April 27, 1983, resolution of the Joint Legislative Oversight Committee. This performance audit was conducted as part of the Sunset Review set forth in Arizona Revised Statutes (A.R.S.) §§41-2351 through 41-2379.

The Arizona Radiation Regulatory Agency was established in 1980 to replace the Arizona Atomic Energy Commission. The Agency's purpose is to protect the public health, safety and welfare in all matters concerned with the use, storage and disposal of radiation sources. The Agency does this by licensing radioactive materials, registering radiation machines, and periodically inspecting all licensees and registrants. In addition, the Agency's major responsibilities include providing technical assistance for incidents or emergencies involving radiation, and conducting environmental surveillance around any fixed nuclear facility or uranium operation.

Arizona Radiation Regulatory Agency's Inspection Activities Could Be Improved (pages 15-28)

The Agency does not conduct all its inspections in a timely manner. X-ray machine and radioactive materials inspections are not always done in accordance with accepted criteria regarding inspection frequency. For example, 29 percent of the X-ray inspections reviewed in the audit exceeded Agency criteria, almost half of which exceeded the criteria by more than 6 months. Agency criteria call for X-ray inspections every 2 to 4 years, depending on the type of registration. The more time that passes between inspections the greater the public health risk. Untimeliness is partially the result of an inadequate inspection scheduling system. In addition, high turnover of professional staff has helped decrease inspection frequency. Furthermore, the need to devote resources to the Agency's Palo Verde Nuclear Generating Station responsibilities serves to reduce the manpower available for inspections.

The X-ray and radioactive materials inspection programs would benefit greatly from the development of a systematic scheduling system. If such a system were kept up to date, the Agency could concentrate its resources on those facilities that most urgently need to be inspected. In addition, the Agency should implement salary increases recommended by the Personnel Division of the Department of Administration and should continue to evaluate its ability to retain professional staff.

The Arizona Radiation Regulatory Agency
Could Strengthen And Improve The Timeliness
Of Its Enforcement Actions (pages 29-39)

The Agency could take stronger or more timely enforcement actions in some instances. The X-ray program's enforcement philosophy seems to result in limited action in some cases that warrant stronger action. Actions that were taken were often poorly documented in Agency files, making it difficult to assess enforcement effectiveness. In addition, in the radioactive materials program, enforcement actions were not fully documented for some cases and follow-up actions were sometimes not taken on a timely basis. The Nuclear Regulatory Commission also noted timeliness and documentation problems in its most recent review of the radioactive materials program. Further, coordination and communication with State medical boards could be improved.

The Agency should pursue stronger enforcement actions in cases that merit such actions. The Agency should also ensure that all licensing and enforcement actions are fully documented and taken on a timely basis. Finally, the Agency should communicate with the appropriate State medical board when a practitioner is found to repeatedly expose patients to radiation levels exceeding established norms.

The Arizona Radiation Regulatory Agency
Has Not Received Nuclear Emergency Management
Funds Sufficient To Cover the Costs Of Its
Palo Verde Activities (pages 41-55)

The Arizona Radiation Regulatory Agency has not received adequate funding from the Nuclear Emergency Management Fund (NEMF) to finance all costs

relating to its Palo Verde Nuclear Generating Station involvement. ARRA has not adequately tracked its Palo Verde related costs and therefore, has been underestimating these costs. In addition, the Arizona Division of Emergency Services, the administrator of the NEMF, has not requested sufficient funds to cover ARRA's estimates. Emergency Services improperly limited its NEMF recommendation to an amount budgeted by Arizona Public Service Company. Consequently, ARRA has financed more than \$160,000 of its Palo Verde costs over the past 2 years with its General Fund appropriations. Because Emergency Services did not request sufficient funds to cover all Palo Verde related costs, A.R.S. §26-306.01 was violated. A.R.S. §26-306.01.B requires the Arizona Division of Emergency Services to make an annual recommendation to the Legislature which is a reasonable estimate of an amount necessary to develop, maintain and support the State nuclear emergency response plan.

ARRA should track its actual Palo Verde related expenditures. This information should be used in developing ARRA's NEMF requests. The Division of Emergency Services should comply with the provisions of A.R.S. §26-306.01 by recommending a NEMF assessment that is a reasonable estimate of an amount adequate to cover all costs of all agencies involved in Palo Verde related activities. The Legislature would then be in a position to determine the appropriate NEMF assessment.

Arizona Radiation Regulatory Agency's
X-ray Program Could Be Improved (pages 57-65)

The effectiveness and efficiency of the X-ray machine registration and fee collection process could be improved. Currently, the Agency's requirement that all X-ray machines be registered is not being adequately enforced. Machine owners are not being held responsible for registering their machines. Consequently, the Agency's information on machine locations is incomplete, which hinders the inspection process. In addition, the registration function is not coordinated with the fee collection process. Fees are due annually in January but registrations take place anytime throughout the year and are good for 4 years. As a result, fee collection is unnecessarily inefficient, and improperly requires inspector involvement. Finally, the Agency's authority over radiation machine installers is not clear.

The fee collection process and registration function should be combined into one annual process. Machine owners should be held responsible for registering their own machines and paying related fees. Inspectors should not be involved in fee collection. Finally, the Legislature should consider amending the statutes to require radiation machine installers to report all installations to the Agency.

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INTRODUCTION AND BACKGROUND

The Office of the Auditor General has conducted a performance audit of the Arizona Radiation Regulatory Agency in response to an April 27, 1983, resolution of the Joint Legislative Oversight Committee. This performance audit was conducted as part of the Sunset Review set forth in A.R.S. §§41-2351 through 41-2379.

The Arizona Radiation Regulatory Agency (ARRA) was established in 1980 to replace the Arizona Atomic Energy Commission (AAEC). ARRA's responsibilities include regulating the use and storage of radioactive materials, providing technical assistance for incidents, accidents, and emergencies involving radioactive materials, and conducting environmental surveillance around any fixed nuclear facility or uranium operation.

Development Of Arizona's Radiation Protection Program

Before 1964 the State Department of Health conducted the activities relating to radiation control in Arizona. The AAEC was created in 1964; however, the Department of Health continued to perform inspections for the AAEC until the end of fiscal year 1967-68.

In 1967 Arizona became the 16th "Agreement State" by entering into an agreement with the United States Atomic Energy Commission (currently the Nuclear Regulatory Commission). This agreement transferred to the State regulatory control of radioactive source materials, small quantities of special nuclear material, radioactive by-products from reactors and uranium and thorium mill tailings, and permanent disposal of low-level waste. In 1980 the Governor amended this agreement, opting not to retain authority over uranium mining and mill tailings. The State, however, reserves the right to regain this authority when it sees fit to do so.

ARRA's activities are currently divided into the following five programs.

Radioactive Materials Licensing Program - This program carries out the licensing of radiological materials, fulfilling Arizona's Agreement State requirements. Currently ARRA oversees almost 400 radioactive materials licensees. Inspection activities for the past 3 years and estimates for fiscal year 1983-84 are shown in Table 1 (page 5). Radioactive materials licensure includes the regulation of medical applications of radiological materials, gauges used in highway and mineral industries, and radiographs to determine depth. ARRA collects radioactive materials licensing fees annually.

X-ray and Nonionizing Compliance Program - This program is responsible for the registration and periodic inspection of radiation machines in Arizona. X-ray inspection activities are presented in Table 1. Presently ARRA has more than 2,300 X-ray registrants. ARRA also registers X-ray equipment installers and servicers. During fiscal year 1982-83 the nonionizing portion of the program handled laser and microwave consultations and surveys. Registration and compliance inspection of nonionizing devices is expected to start in fiscal year 1984-85 subsequent to promulgation of applicable regulations.

Emergency Response Program -- This program carries out ARRA's responsibilities for providing technical support in the case of any radiological incident, accident or emergency within Arizona. Program personnel developed a supplement to the off-site emergency response plan for the Palo Verde Nuclear Generating Station (PVNGS). This supplement provides directions for assessing and protecting against radiation hazards in the event of an emergency. In addition, program staff train and coordinate the Radiological Emergency Assistance Team (REAT). The REAT, which consists of volunteer personnel from county and State agencies, assists ARRA in fulfilling its PVNGS off-site monitoring responsibilities. Table 1 presents emergency response activities since fiscal year 1980-81.

Environmental Surveillance Program - This program's priority is the off-site environmental monitoring around PVNGS. Preoperational environmental surveillance and emergency sampling and analysis in the event of an accident are part of the program's PVNGS responsibilities. The staff also provides laboratory analyses for ARRA's other programs. Laboratory analysis activities are shown in Table 1.

Low-level Radioactive Waste Disposal Program - This newly established program was set up to oversee Arizona's provisions for disposal of low-level and possibly high-level radioactive waste. Program staff, in conjunction with the state of California, drafted legislation that will provide for a low-level waste compact with California. The Arizona Legislature passed this legislation in 1984; the California Legislature adjourned in 1984 without passing the legislation but will reconsider the proposal in their next session in January 1985.

Budget and Personnel

ARRA's revenues come from the General Fund, the Radiation Regulatory Licensing and Registration Fund, and the Nuclear Emergency Management Fund (NEMF). The NEMF was established in fiscal year 1980-81 to provide funding from the utilities for Arizona's nuclear generating station emergency response activities. General Fund revenues and expenditures for fiscal years 1979-80 through 1982-83 and estimated amounts for fiscal year 1983-84 are shown in Table 2 (page 6). NEMF revenues and expenditures since fiscal year 1980-81 are shown in Table 3 (page 6).

ARRA had 28 full-time equivalent positions in fiscal year 1983-84; two of these positions are funded from the NEMF. No additional positions will be added in fiscal year 1984-85.

Audit Scope and Purpose

Our audit of ARRA addressed issues set forth in the 12 Sunset Factors in A.R.S. §41-2354. Additional detailed work was done on the following issues.

- Whether the Agency's inspection and enforcement activities are effective and at an adequate level.
- Whether the Agency is being properly reimbursed for its Palo Verde related activities.
- Whether efficiency and effectiveness can be improved in the following administrative areas:
 1. X-ray machine registration and fee collection process.
 2. Notification system regarding installation of new radiation machines.

In addition, we conducted a limited review of ARRA's licensing and registration fee system and of other states' systems for funding activity related to nuclear generating stations.

The Auditor General and staff express appreciation to the director and staff of the Arizona Radiation Regulatory Agency for their cooperation and assistance during the course of our audit.

TABLE 1
INSPECTION AND LICENSING ACTIVITIES
FOR FISCAL YEARS 1980-81 THROUGH 1983-84

| | <u>Actual 1980-81</u> | <u>Actual 1981-82</u> | <u>Actual 1982-83</u> | <u>Estimated 1983-84</u> |
|--------------------------------------|---------------------------|---------------------------|---------------------------|------------------------------|
| Lab Sample Analyses | 4,580 | 5,541 | 6,906 (1) | 8,000 |
| X-ray Registrants Inspected | 907 | 935 | 504 | 700 |
| Machines Inspected | 1,442 | 1,987 | 790 (2) | 1,200 |
| Tubes Inspected | 1,737 | 2,417 | 911 (2) | 1,500 |
| Microwave | 50 | 32 | 20 | 30 |
| Laser | 2 | 3 | 1 | 4 |
| Radioactive Materials Licenses | 415 | 411 | 380 | 410 |
| New Licenses and License Renewals | 47 | 29 | 32 | 30 |
| Inspections | 231 | 188 | 179 | 350 |
| Emergency Response Incidents | 5 | 13 | 10 | 15 |

Source: Arizona Radiation Regulatory Agency budget request for fiscal year 1984-85

- (1) Lab sample analyses increased significantly in fiscal year 1982-83 as a result of a shift of resources toward actual sample analysis and away from initial development of lab procedures.
- (2) X-ray inspection activity decreased significantly in fiscal year 1982-83 as a result of inspectors devoting time to: 1) the newly established fee collection process, 2) Palo Verde related activities, and 3) an attempt to manually establish detailed inspection scheduling.

TABLE 2

GENERAL FUND AND LICENSE AND REGISTRATION FUND
REVENUES AND EXPENDITURES FOR FISCAL YEARS 1980-81 THROUGH 1983-84

| | <u>FY 1980-81</u> Actual | <u>FY 1981-82</u> Actual | <u>FY 1982-83</u> Actual | <u>FY 1983-84</u> Estimated |
|--|-----------------------------|-----------------------------|-------------------------------|--------------------------------|
| Authorized Full-Time Equivalent Positions | 27 | 27 | 27 | 26 |
| Revenues: | | | | |
| General Fund | | | | |
| Appropriation | \$1,106,400 | \$1,036,500 | \$ 864,400 | \$ 935,200 |
| Licensing/ Registration Fees | | | 164,600 | 140,000 |
| Carry-Forward From Prior Year | | | | 164,600 |
| Total | <u> </u> | <u> </u> | <u> </u> | <u> </u> |
| Revenues | <u>\$1,106,400</u> (1) | <u>\$1,036,500</u> (1) | <u>\$1,029,000</u> (1) (2) | <u>\$1,239,800</u> (2) |
| Expenditures: | | | | |
| Personal Services | 367,600 | 526,400 | 548,000 | 590,700 |
| Employee Related | 72,000 | 107,100 | 111,700 | 131,700 |
| Professional/Outside Services | 95,400 | 9,000 | 5,200 | 11,000 |
| Travel: | | | | |
| In-State | 26,300 | 25,200 | 15,300 | 25,000 |
| Out-Of-State | 13,000 | 7,400 | 2,200 | 0 |
| Other Operating Expenditures | 222,000 | 149,100 | 133,000 | 174,900 |
| Equipment | 147,900 | 123,200 | 200 | 1,900 |
| Total | <u> </u> | <u> </u> | <u> </u> | <u> </u> |
| Expenditures | 944,200 | 947,300 | 815,600 | 935,200 |
| Amount Reverted to General Fund | 162,300 | 89,400 | 49,000 | 0 |
| Licensing Fees Carry-Forward | | | 164,600 | |
| Remit To General Fund | | | | 304,600 |
| Total | <u>\$1,106,500</u> (1) | <u>\$1,036,800</u> (1) | <u>\$1,029,200</u> (1) (2) | <u>\$1,239,800</u> (2) |

Sources: Arizona Radiation Regulatory Agency unaudited annual reports for 1981 through 1983 and ARRA budget requests

(1) Differences between revenues and expenditures in fiscal year 1980-81 through 1982-83 are due to rounding and other immaterial discrepancies that ARRA personnel could not explain.

(2) Totals for fiscal years 1982-83 and 1983-84 reflect both General Fund appropriations plus accumulated licensing fees; however these totals do not reflect amounts actually available to the Agency, as the Agency's expenditures are limited to its General Fund appropriation in any one year.

TABLE 3

NUCLEAR EMERGENCY MANAGEMENT FUND REVENUES AND EXPENDITURES
FOR FISCAL YEARS 1980-81 THROUGH 1984-85

| | <u>FY 80-81</u> <u>Actual</u> | <u>FY 81-82</u> <u>Actual</u> | <u>FY 82-83</u> <u>Actual</u> | <u>FY 83-84</u> <u>Estimated</u> | <u>FY 84-85</u> <u>Approved</u> |
|--|----------------------------------|----------------------------------|----------------------------------|-------------------------------------|------------------------------------|
| Full Time Equivalent Positions | | | | 2 | 2 |
| Revenues: | | | | | |
| NEMF Allocation | \$30,400 | \$142,100 | \$337,300 | \$233,000 | \$102,800 |
| Carry-Forward From Prior Year | <u> </u> | <u>5,400</u> | <u>26,900</u> | <u>11,500</u> | <u>20,000</u> (3) |
| Total Revenues | <u>\$30,400</u> (2) | <u>\$147,500</u> (2) | <u>\$364,200</u> (2) | <u>\$244,500</u> | <u>\$122,800</u> |
| Expenditures: | | | | | |
| Personal Services | | \$ 6,200 | | \$ 46,300 | \$ 60,000 |
| Employee Related Professional And Outside Services | | 1,200 | | 13,500 | |
| | | 500 | 11,000 | 10,000 | |
| Travel: | | | | | |
| In-State | | 900 | 2,400 | 10,000 | 3,300 |
| Out-Of-State | | 3,300 | 11,800 | 10,000 | |
| Other Operating Expenditures | | 10,600 | 58,600 | 51,100 | 34,500 |
| Equipment | | <u>98,100</u> | <u>268,000</u> | <u>92,100</u> | <u>25,000</u> |
| Total Expenditures | 24,900 (1) | 120,800 | 351,800 | 233,000 | 122,800 |
| Carry-Forward | <u>5,400</u> | <u>26,900</u> | <u>11,500</u> | <u>11,500</u> (3) | <u> </u> |
| Total | <u>\$30,300</u> (2) | <u>\$147,700</u> (2) | <u>\$363,300</u> (2) | <u>\$244,500</u> | <u>\$122,800</u> |

Sources: Revenues were obtained from Arizona Radiation Regulatory Agency appropriation bills. Expenditure detail was obtained from various ARRA documents.

- (1) Detailed expenditure data was not available for fiscal year 1980-81.
- (2) Differences between revenues and expenditures in fiscal years 1980-81 through 1982-83 are due to rounding and other immaterial discrepancies that ARRA personnel could not explain.
- (3) The difference between the carry-forward from fiscal year 1983-84 and the carry-forward to fiscal year 1984-85 is due to the fact that original estimates are shown for fiscal year 1983-84 expenditures; however, the Agency later projected that it would incur vacancy savings and incorporated these savings in its fiscal year 1984-85 request, increasing the carry-forward from fiscal year 1983-84 (see Finding III, page 46).

SUNSET FACTORS

In accordance with A.R.S. §41-2354, the Legislature should consider the following 12 factors in determining whether the Arizona Radiation Regulatory Agency should be continued or terminated.

1. Objective and purpose in establishing the Agency

Legislative intent in establishing the Arizona Radiation Regulatory Agency (ARRA) is to mitigate the risks to the public inherent in exposure to radiation. Laws 1980, chapter 206 §1 states:

"It is declared to be the policy of this state to protect the public health and safety by regulating the use and sources of radiation to provide for (1) use of methods and procedures relating to radiation which are demonstrated to be safe; and (2) maintaining exposure to sources of radiation in amounts as low as is reasonably achievable by means of good radiation protection planning, practice and enforcement."

Consequently, the Agency's overall objective is to safeguard the public health and safety in all matters concerned with the use, storage, and disposal of sources of radiation. This includes taking necessary action with regard to accidents, incidents or emergencies involving radiation.

2. The effectiveness with which the Agency has met its objective and purpose and the efficiency with which the Agency has operated

The Agency has generally met its objectives and purpose. The Agency licenses radioactive materials and registers radiation machines. Both licensees and registrants are subject to compliance inspections. However, the Agency could improve its effectiveness in the area of compliance inspection frequency, enforcement of its rules and regulations, and documentation of enforcement activities (see Finding I, page 15, and Finding II, page 29).

ARRA has effectively responded to radiation-related emergencies and incidents within the State. ARRA has been praised for its actions relating to a recent incident involving radioactive rebar imported from Mexico. ARRA has also been rated highly in past exercises that tested the State's capabilities for reaction to potential emergencies involving radiation emissions from the Palo Verde Nuclear Generating Station.

3. The extent to which the Agency has operated within the public interest

The Agency's inspection, emergency response, and environmental surveillance functions serve the public interest by attempting to monitor and mitigate the public's exposure to radiation. However, the public interest could be better served if the Agency adopted more of an enforcement oriented philosophy (see Finding II, page 29). With regard to emergency response, the U.S. Nuclear Regulatory Commission (NRC) recently commended ARRA for its handling of the 1984 contaminated Mexican rebar incident. ARRA was praised for ". . . prompt and thorough actions taken to control the radiological hazards of this incident and protect the public health and safety."

4. The extent to which rules and regulations promulgated by the Agency are consistent with the legislative mandate

The Agency has been updating its rules and regulations over the past 3 years. Several articles are close to being approved for consistency with statutes by the Attorney General. However, a problem with one article arose during the Attorney General's review with regard to a requirement for the registration of X-ray machine installers that was inconsistent with the statutes (see Finding IV, page 57). Other articles have not yet been reviewed by the Attorney General and are at various stages of development.

The Nuclear Regulatory Commission has cited ARRA for failure to have updated regulations that are consistent with theirs. This consistency

is a requirement of ARRA's agreement with the NRC. The NRC noted this problem in letters to ARRA dated January 1982, May 1983 and June 1984.

5. The extent to which the Agency has encouraged input from the public before promulgating its rules and regulations and the extent to which it has informed the public as to its actions and their expected impact on the public

The Agency files notices with the Secretary of State regarding public rules and regulations hearings. Four such filings have been made since 1982. The Agency also sends notices of hearings to trade and professional organizations. The Agency appears to have complied with open meeting law requirements for these hearings. The Agency also generally informs the public of its activities through a periodic newsletter and press releases.

6. The extent to which the Agency has been able to investigate and resolve complaints that are within its jurisdiction

Complaints that have been received appeared to have been adequately investigated and resolved. The Agency generally does not appear to receive a great volume of complaints from the public regarding radiation hazards. However, approximately 6,000 inquiries were recently received from the media and the public regarding radiation hazards of imported Mexican rebar steel.

7. The extent to which the Attorney General or any other applicable agency of State government has the authority to prosecute actions under enabling legislation

The Agency has specific statutory authority to assess civil penalties, impound dangerous radiation sources, and suspend, modify or revoke licenses. A.R.S. §30-685 specifically gives the Attorney General the authority upon Agency request to make application to the appropriate court for an order enjoining any act that violates ARRA's statutes,

rules or regulations. In addition, A.R.S. §30-687.A requires the Attorney General to bring actions necessary to collect civil penalties. Further, A.R.S. §30-689 establishes that any person violating ARRA's statutes, rules, or regulations is guilty of a class 2 misdemeanor. This authority granted by the statutes appears to be adequate.

8. The extent to which the Agency has addressed deficiencies in the enabling statutes which prevent it from fulfilling its statutory mandate

The Agency proposed legislation to enable a low-level waste disposal compact with the state of California. This legislation was passed as Senate Bill 1365 in 1984. This bill designates ARRA as the agency responsible for administrative and enforcement duties in Arizona not specifically assigned to the Governor. At the present time, the Agency does not perceive any deficiencies in its statutes.

9. The extent to which changes are necessary in the laws of the Agency to adequately comply with the factors listed in the Sunset Law

One change is needed in the Agency's statutes. A.R.S. §30-672 should be amended to give the Agency the authority to require radiation machine installers to file reports on all installations of machines (see Finding IV, page 57).

10. The extent to which the termination of the Agency would significantly harm the public health, safety or welfare

Termination of the Agency could significantly harm the public health, safety and welfare. Radiation exposure poses considerable health risks. Efforts should be made to keep public radiation exposure as low as reasonably possible to mitigate these risks. ARRA's inspection (including licensing and registration), environmental surveillance, and emergency response activities are important to this goal.

11. The extent to which the level of regulation exercised by the Agency is appropriate and whether less or more stringent levels of regulation would be appropriate

Currently, the level of regulation exercised by the Agency appears to be generally appropriate. However, the Agency could sometimes take stronger enforcement actions as a result of its radioactive materials and X-ray inspection activities (see Finding II, page 29). There are also several areas into which the Agency could expand in the future if deemed necessary, including drinking water analysis, nonionizing surveillance (microwave and lasers), monitoring uranium mill tailings, monitoring materials used in home construction for radioactivity, and developing techniques for recovery after a major accident involving radiation (such as at a nuclear plant).

12. The extent to which the Agency has used private contractors in the performance of its duties and how effective use of private contractors could be accomplished

The Agency does not use private contractors to a significant degree in the performance of its primary duties. However, the Agency does contract out analysis of its employees' film badges. These film badges are used to assess radiation exposure of individuals who work near radiation sources. In addition, private contractors have been used for staff training (particularly relating to emergency response and Palo Verde), preparation of educational materials, evaluation of Palo Verde emergency response plans, instrument calibration, and assistance in setting up a new computer system in the environmental surveillance laboratory. ARRA's director considers using private contractors whenever the expertise or manpower is not available in-house to perform a needed function.

FINDING I

ARIZONA RADIATION REGULATORY AGENCY'S INSPECTION ACTIVITIES COULD BE IMPROVED

The Arizona Radiation Regulatory Agency (ARRA) could improve its inspection activities. The Agency, through the X-ray compliance and radioactive materials programs, has not conducted timely inspections of X-ray machines and radioactive materials. Scheduling practices, staffing problems and Palo Verde Nuclear Generating Station activities have adversely impacted the X-ray and radioactive materials programs.

ARRA's Inspection Programs

ARRA is instructed by statute to "Regulate the use, storage and disposal of sources of radiation." This rather broad mandate directs the Agency to adopt inspection and enforcement regulations and programs to adequately protect the public from excessive exposure to radiation sources. Currently, ARRA operates two regulatory programs - X-ray compliance and radioactive materials. Each program is empowered to regulate the use and possession of various sources of radiation. These programs serve to protect the public from radiation health hazards.

X-Ray Compliance - The X-ray compliance program regulates ionizing (X-rays) and nonionizing (lasers, microwaves, radar and other forms of electromagnetic radiation) radiation sources. To accomplish its regulatory duty, the X-ray program registers facilities that possess ionizing radiation-producing sources. Approximately 2,400 registrations are on file with the Agency at this time, representing 4,447 X-ray machines and 5,489 X-ray tubes, according to the X-ray program manager. In addition, the X-ray compliance program is required to conduct initial and periodic inspections of registered facilities possessing ionizing radiation producing sources. The frequency of the periodic inspections is determined by criteria established by the X-ray program and is compatible with criteria developed by the Conference of Radiation Control Program

Directors. The Conference's criteria are meant to be guidelines for state programs. The X-ray program's schedule, which requires inspections every 2 to 4 years depending on facility type, is presented in Table 4 alongside the Conference's guidelines.

Beyond periodic or routine inspections, both the X-ray program and the Conference consider the inspection of new facilities a high priority. While the Conference suggests that initial inspections be conducted within 1 year of installation, the Agency is more stringent, requiring that initial inspections be conducted within 30 days of installation. In addition, the Conference recommends that every facility be inspected or surveyed at least once every 5 years, while ARRA allows a maximum of 4 years.

Radioactive Materials - Under the Agreement State Contract with the Nuclear Regulatory Commission (NRC), ARRA is responsible for the control of radioactive by-product material.* This contract requires that ARRA's rules and regulations be compatible with the NRC's Administrative Law Code, 10 CFR 20. To fulfill the Agreement State Contract, the radioactive materials program licenses the users of by-product materials. Approximately 300 specific and 150 general medical licenses are currently issued by the Agency according to the program manager.

The radioactive materials program is responsible for conducting initial and periodic inspections of licensed radiation source users. The frequency of inspections is determined by criteria established by the Agency and the Nuclear Regulatory Commission. ARRA, through the Agreement State Contract, is required to "use its best efforts to maintain continuing compatibility with the NRC's program" of regulating radiation source users. Although the NRC's criteria are meant to be the minimum level of inspection frequency, the Agency had recently changed from its own

* By-product material is any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear materials. Special nuclear materials in quantities sufficient to form critical mass are licensed by the NRC.

more stringent criteria* to a version of the NRC's criteria.**

Radiation Health Risks - ARRA's two inspection programs were created to protect the public from the potentially serious health risks involving excessive exposure to radiation. The Committee on Federal Research on the Biological and Health Effects of Ionizing Radiation has classified four major types of effects of ionizing radiation:

"Cancer may be induced . . . in different tissues and appear after various lengths of time (latent periods) following radiation exposure. The minimal latent periods may vary from 2 [years] for leukemia to 15 [years] or longer for some solid cancers.

Genetic or heritable changes . . . may occur in . . . [offspring] and in future generations derived from exposed humans.

. . . developmental changes may occur during the development of the embryo or fetus exposed to radiation during gestation.

Degenerative changes may occur as expressions of local radiation injury, e.g., cataractogenesis, impairment of fertility, and altered immune responses."

ARRA must adopt strong inspection and enforcement programs if the public is to be properly protected from such hazards.

Inspection Timeliness
Could Be Improved

ARRA could increase the frequency of X-ray and radioactive materials inspections. Within the X-ray compliance program, excessive time has elapsed between routine inspections of registered radiation sources. In addition, the radioactive materials program has experienced difficulty in conducting timely inspections of licensed radiation source users.

* The Agency's criteria required an inspection of all radioactive materials licenses within 18 months.

** The exact time of this transition is unclear. The NRC states that ARRA changed in April of 1983, while the radioactive materials program manager has stated that the transition took place sometime around January of 1984.

X-ray Inspections Have Been Untimely - The X-ray compliance program has had difficulty conducting inspections in a timely manner. A random sample of the program's registration files indicated problems with inspection timeliness.* In many instances the time between inspections for individual facility type exceeds Agency and national criteria. Furthermore, the survey identified cases in which excessive time elapsed between new installations and initial inspections.

Table 4 illustrates the untimeliness of the X-ray program's inspections. Twenty-nine percent of the inspections reviewed in the random sample exceeded the Agency's criteria, almost half of which exceeded the criteria by more than 6 months. In addition, 11 percent of the facilities reviewed were past due for their next inspection as of April 30, 1984, under the Agency's criteria.

* A random sample of the Agency's registration and licensing files was utilized in which 250 X-ray registration files and 70 radioactive materials licensing files were drawn.

TABLE 4
INSPECTIONS EXCEEDING CRITERIA
FOR THE PERIOD JANUARY 1, 1982 THROUGH APRIL 30, 1984

| Registrant Category | Number of Facilities In Sample | Total Inspections Conducted | Inspections Within Agency Criteria | 6 mos. or Less Over Agency Criteria | More Than 6 Mos. Over Agency Criteria | Time Since Last Inspection Over Agency Criteria | | Agency Criteria | Conference Criteria |
|---------------------|--------------------------------|-----------------------------|------------------------------------|-------------------------------------|---------------------------------------|---|----------------|-----------------|---------------------|
| | | | | | | 6 Mos. or Less | 6 Mos. or More | | |
| Hospitals | 35 | 27 | 11 | 12 | 4 | 3 | 9 | 24 | 12 |
| Medical | 45 | 30 | 24 | 4 | 2 | 3 | 4 | 24-36 | 24 |
| Chiropractic | 30 | 17 | 15 | 1 | 1 | 2 | 3 | 24-36 | 24 |
| Veterinary | 20 | 7 | 7 | 0 | 0 | 0 | 1 | 48 | 24 |
| Dental | 60 | 25 | 19 | 0 | 6 | 0 | 0 | 36-48 | 60 |
| Industrial | 20 | 5 | 2 | 2 | 1 | 0 | 0 | 24-48 | 24-48 |
| Podiatric | 15 | 12 | 8 | 2 | 2 | 3 | 0 | 24-36 | N/A |
| Osteopathic | 15 | 9 | 9 | 0 | 0 | 0 | 0 | 24-36 | N/A |
| Educational | <u>10</u> | <u>4</u> | <u>1</u> | <u>1</u> | <u>2</u> | <u>0</u> | <u>0</u> | 24-36 | N/A |
| Total | <u>250</u> | <u>136</u> | <u>96</u> | <u>22</u> | <u>18</u> | <u>11</u> | <u>17</u> | | |

Source: Random sample of ARRA's X-ray registrant files

Extreme instances of untimely inspections were also evident. The survey noted individual instances of registered facilities that had not been inspected for substantial periods of time. For example:

- Four hospitals had not been inspected for more than 36 months.
- Six medical facilities had not been inspected for more than 40 months.
- One veterinary facility had not been inspected for more than 87 months.
- The University of Arizona Medical Center, with almost 50 registered machines, had not been inspected since September of 1981 (31 months).

Initial inspections of facilities with newly installed machines have also been untimely. Many facilities operated well over the program's 30-day criteria before an initial inspection occurred. The survey identified that since 1981 there were 14 facilities with new machine installations that operated for more than 12 months before an initial inspection was conducted.

Extreme cases of untimely initial inspections were also identified. For example, at the time of the random sample:

- A medical facility had operated for 42 months without an initial inspection.
- A dental facility had operated for 57 months without an initial inspection.
- A veterinary facility had operated for more than 87 months without an initial inspection.

Untimely Radioactive Materials Inspections - The radioactive materials program could also improve its inspection frequency. A random sample of the radioactive materials licenses identified numerous instances in which excessive time elapsed between inspections of licensed users. These intervals exceed inspection frequency criteria established by the Agency

and, according to the Nuclear Regulatory Commission, have lowered the program's frequency of inspections to the minimum accepted by the Nuclear Regulatory Commission.

Several cases of untimely inspections were identified through the random sample, encompassing the 18 types of radioactive materials licenses. However, the sample results on the inspection frequency of hospitals best illustrates this point.

Hospital inspections are a high priority of ARRA and the NRC since the direct use of by-product material with patients and the use of unsealed sources* create a greater risk to public health and safety. Although NRC criteria require an inspection of each hospital at a minimum of once every 24 months, the Agency believes that the potential hazards warrant an inspection of hospitals at a minimum of once every 18 months.

Twelve of the approximately 44 hospitals licensed by ARRA for the possession of radioactive materials were reviewed in the random sample. All 12 of these hospitals are licensed to use by-product material and unsealed sources for diagnostic and therapeutic treatment. Analyses included the number of days since the last inspection was conducted and the number of days between previous inspections. Table 5 summarizes the inspection frequency of the 12 hospitals.

* Unsealed sources are radioactive materials that are not permanently bonded or fixed in capsules to prevent release of radiation.

TABLE 5
INSPECTION FREQUENCY DATA FOR 12 HOSPITALS

| Hospital | Date of Last Inspection | Time Elapsed (Months) (1) | Date of Previous Inspection | Time Elapsed (Months) (2) |
|----------|-------------------------|---------------------------|-----------------------------|---------------------------|
| A | August 1982 | 21 | August 1980 | 24 |
| B | March 1982 | 26 | December 1981 | 3 |
| C | March 1982 | 26 | (3) | |
| D | March 1984 | 2 | September 1982 | 18 |
| E | May 1982 | 24 | April 1980 | 25 |
| F | March 1984 | 2 | (3) | |
| G | March 1984 | 2 | (3) | |
| H | December 1983 | 5 | (3) | |
| I | March 1984 | 2 | April 1982 | 23 |
| J | April 1984 | 1 | September 1980 | 43 |
| K | April 1984 | 1 | December 1982 | 16 |
| L | April 1984 | 1 | December 1982 | 16 |

Source: Compiled by Auditor General staff from the random sample of radioactive materials license files

- (1) Denotes the months elapsed between the date of last inspection and the date the sample was taken (May 25, 1984).
- (2) Denotes the months elapsed between the date of last inspection and the previous inspection of the facility.
- (3) Last inspection was initial inspection of the facility.

Table 5 reveals that the radioactive materials program, in most instances, did not meet its own inspection frequency criteria for conducting hospital inspections and, in some instances, exceeded the minimum criteria established by the NRC.

Presently, the program's frequency of inspections is at the minimum level accepted by the Nuclear Regulatory Commission. In its most recent audit, the NRC calculated the backlog of all inspections at 10 to 25 percent.*

* The NRC employed two methods to calculate the percentage of backlog: 1) Dividing the number of overdue inspections in the 1-year period of April 8, 1983, to April 8, 1984, by the total number of radioactive licenses - 30 divided by 288 = 10.4 percent. 2) Dividing the number of overdue inspections during the 1-year period by the number of scheduled inspections during the same period - 30 divided by 117 = 25.6 percent.

According to the NRC, the Agency's inability to maintain a consistent level of inspection frequency within the X-ray compliance and radioactive materials programs could adversely affect public health and safety by potentially increasing the number of items of noncompliance cited on subsequent overdue inspections. An expert in the field stated that the more time that passes between inspections, the greater the health risk. This is the underlying premise for setting inspection frequency criteria.

Scheduling Practices, Staffing Problems And
PVNGS Have Adversely Affected Inspection Timeliness

The X-ray compliance and radioactive materials programs' inspection timeliness have been adversely impacted by scheduling practices, staffing problems and Palo Verde Nuclear Generating Station (PVNGS) activities.

Inadequate Scheduling Practices Have Decreased Inspection Timeliness - An inadequate system of scheduling X-ray registration and radioactive material licensing inspections has contributed to the Agency's inability to conduct inspections in a timely manner. Both programs use a manually maintained card file* to schedule inspections, which is inefficient and contributes to the untimeliness of inspections. Automation of the scheduling system could greatly increase inspection efficiency.

- The X-ray compliance program's inspection scheduling inadequacies are due to the lack of a prepared schedule. Presently, the program's primary scheduling tool is a card file containing information on the more than 2,400 registrations issued by the Agency. This system of scheduling is inefficient and results in untimely inspections.

The X-ray program does not schedule inspections from a predetermined schedule. The current method allows the program's inspectors to select a majority of their own inspection sites from the card file.

* The cards are filed alphabetically within subgroups of county and discipline and each card has the registrant or licensee's name and address, the number of registered X-ray machines and tubes or the type of licensed radiation source, and the date of last inspection.

Scheduling inspections from the card file is inefficient. In many instances, facilities are inspected because they are noticed by an inspector during the inspection of another facility within the area. Consequently, some facilities are inspected before required by Agency criteria, while other facilities remain uninspected for unacceptable periods.

Another problem involves the vulnerability of the cards themselves. In the past, cards have been lost or misplaced. Consequently, facilities have gone without inspections for years without Agency personnel being aware of their existence, although a separate registration file for the facility was maintained by the Agency.

In addition to problems caused by the card file, inspections are often prioritized based on geographic location. According to the X-ray compliance program manager, to compensate for a lack of manpower, inspections have been concentrated in geographic areas that contained proportionately more radiation machines. Therefore, machines in urban areas have tended to be inspected more frequently than machines in rural areas. The program manager stated that the purpose of this practice was to keep the total number of inspections per year at an acceptable level.

- The radioactive materials program's inspection scheduling problems are also due to an inadequate scheduling system. Although an 18 month inspection schedule has been created, it fails to identify overdue inspections, repeat violators and follow-up inspections in a timely manner. In addition, the current scheduling system does not reflect the NRC's inspection frequency criteria.

The radioactive materials program utilizes a card file to generate an 18 month inspection schedule. The program manager reviews the cards and establishes the priority and inspection frequency for each license. Procedures for the use of this schedule call for individual inspectors to select inspections that are overdue or are due for the

current month. Those inspections not selected are assigned by the program manager.

Once produced, the 18 month inspection schedule is infrequently updated, because the cards are used as a source for the schedule. Since the schedule becomes fixed once created, it is difficult for the status of overdue inspections and inspections with previous citations of noncompliance, which require more attention from program personnel, to be reflected on the schedule in a timely manner.

In addition, the 18 month schedule does not reflect the NRC's inspection frequency criteria. As mentioned previously, the program recently abandoned its own criteria and adopted a version of the NRC inspection frequency criteria. However, the 18 month schedule from which the Agency is currently operating has not been altered to reflect this substantial change in the program's inspection frequency. Due to the inflexibility of the fixed schedule, it was difficult for the program manager to make the necessary changes in a timely manner.

- Automation of the X-ray compliance and radioactive materials programs' scheduling systems should increase inspection frequency and efficiency. It will allow the programs to engage in longer range and more systematic scheduling, thereby increasing the programs' ability to maintain an information data base on the status and condition of inspection and enforcement activities.

Other state radiation control programs, such as Georgia and South Carolina, have completely automated their licensing files. Both states have had favorable experiences with such a system, noting considerable advantage over a manual scheduling system, particularly one derived from a card file.

According to the deputy director, ARRA has begun to computerize the Agency's licensing files for scheduling inspections and enforcement

actions. The Agency's existing computer system is sufficient to begin automation. However, additional hardware and software may be necessary for ARRA to implement a computer system capable of providing an adequate data base.

Staff Turnover Has Reduced Inspection Frequency - ARRA's problems in retaining experienced technical and clerical staff have also contributed to the untimeliness of inspections. Staff turnover has been one of the Agency's major concerns, and reduces the amount of inspectors' time available and increases training time necessary for new recruits.

Turnover has negatively affected program performance. The X-ray and radioactive materials programs have historically operated with less staff than has been authorized. By calculating worker months* available for each fiscal year, a total number of available full-time equivalent positions (FTEs) can be derived for each of the last 4 fiscal years. Table 6 compares available FTEs with authorized FTEs.

TABLE 6

AVAILABLE FTEs IN THE X-RAY AND RADIOACTIVE MATERIALS PROGRAMS
FOR FISCAL YEARS 1981 THROUGH 1984

| | <u>FY 1981</u> | <u>FY 1982</u> | <u>FY 1983</u> | <u>FY 1984</u> |
|-----------------------|----------------|----------------|----------------|----------------|
| X-ray Compliance | | | | |
| FTEs Authorized | 4 | 4 | 4 | 5 |
| FTEs Available | 3 | 4 | 3.4 | 3.9 |
| Radioactive Materials | | | | |
| FTEs Authorized | 5.5 | 5.5 | 5 | 5 |
| FTEs Available | 4.7 | 5 | 3.1 | 3.3 |

Source: Compiled by Auditor General staff from ARRA personnel information

Besides lessening available manpower for long periods of time, continuous turnover diverts time normally spent on inspections to the necessary task of training new personnel. Furthermore, each new inspector requires a significant period of time before working at a level comparable to veteran inspectors.

* One FTE working for 1 full month equals 1 worker month. Twelve worker months equates to the availability of one FTE for 1 year.

According to the Agency, the increasing national demand for health physicists has negatively affected its ability to retain and recruit qualified staff professionals. ARRA's turnover reached its peak in fiscal year 1983, when 44 percent of the Agency's staff resigned. According to the deputy director, the recruitment effort that followed was much longer and more difficult than anticipated.

The Agency's turnover problem has recently been reviewed by the Personnel Division of the Department of Administration. In its report, the Personnel Division reached the following conclusions:

- "1) Present classifications and class specifications are inadequately serving these positions, the employees who work in them and the Arizona Radiation Regulatory Agency.
- 2) Compensation levels for the current series examined in the review appear to be inconsistent when compared with other job classes in state agencies."

The Personnel Division addressed the Agency's turnover problem by recommending a reclassification of Agency technical positions to provide for compensation increases and career development for the Agency's technical staff.

The evidence available indicates that the Agency's inability to offer competitive salaries compared with other entities in the region that employ health physicists, has hampered its efforts to hire and retain qualified personnel. The PVNGS project, for example, has been successful in attracting ARRA personnel by offering higher salaries. However, it is not clear whether higher salaries alone will resolve the Agency's turnover problem.

Palo Verde Nuclear Generating Station Activities - PVNGS exercises have reduced the amount of time available for inspections in both the X-ray and radioactive materials programs (see Finding III, page 42). Agency records indicate that X-ray and radioactive material inspectors devote approximately 10 percent of their time to PVNGS exercises. However, since ARRA is required by statute to: "Assume primary responsibility for and

provide necessary technical assistance to handle any incidents, accidents and emergencies involving radiation or sources of radiation occurring within this state," Agency staff time devoted to PVNGS activities is unavoidable. This added responsibility makes it even more important for the Agency to properly schedule inspections so they can be conducted in a timely manner.

CONCLUSIONS

The inspection activities of the Arizona Radiation Regulatory Agency could be improved. Scheduling practices, staffing problems and Palo Verde Nuclear Generating Station activities have adversely affected the X-ray compliance and radioactive materials programs' ability to conduct inspections in a timely manner.

RECOMMENDATIONS

1. The Agency should improve its system of scheduling inspections for both the X-ray compliance and radioactive materials programs.
2. The Agency should implement the Personnel Division's recommendations and continue to evaluate its ability to compensate professional staff at competitive rates.

FINDING II

THE ARIZONA RADIATION REGULATORY AGENCY COULD STRENGTHEN AND IMPROVE THE TIMELINESS OF ITS ENFORCEMENT ACTIONS

The Arizona Radiation Regulatory Agency's (ARRA) X-ray and radioactive materials enforcement actions have been weak and untimely in some instances. ARRA's enforcement authority is adequate. However, within the X-ray compliance program, we identified cases in which stronger enforcement actions may have been merited or actions were poorly documented. In addition, instances were revealed in which the radioactive materials program failed to adequately document enforcement actions and required excessive amounts of time to complete them. These problems result at least partially from a lenient enforcement philosophy, particularly within the X-ray program, which has adversely impacted the Agency's ability to properly pursue enforcement actions. Furthermore, the X-ray compliance program's coordination with the State's various medical boards could be improved.

ARRA's Enforcement Authority Is Adequate

The Agency is adequately empowered to enforce its administrative regulations. A.R.S. §30-688 states:

"To enforce this chapter, the agency shall by rule and regulation, prescribe procedures for implementing an escalated enforcement action. An escalated enforcement action may include actions such as an informal hearing, impounding of radiation sources, assessment of civil penalties, an order modifying, suspending, or revoking a license issued under this chapter or recommending prosecution of a criminal action."

In addition, A.R.S. §30-685 states:

"When the agency finds that any person has engaged in or is about to engage in any act or practice which constitutes or will constitute a violation of any provision of this chapter or any rule, regulation or order issued under this chapter, the attorney general

may, upon request of the agency, make application to the appropriate court for an order enjoining such acts or practices or for an order directing compliance. Upon a showing by the agency that such person has engaged or is about to engage in any such act or practice, a permanent or temporary injunction, or restraining order or other order may be granted."

The statute authorizing ARRA to impose civil penalties has been in effect since July 31, 1980. Rules and regulations specifying such penalties were added by ARRA in June 1983. ARRA recently assessed its first civil penalty, which was for \$3,000.

The X-ray and radioactive materials programs have developed standard operating procedures for facilities found not to be in compliance with Agency administrative regulations. A letter of noncompliance is transmitted to the violator giving 30 days to correct the violation(s). If satisfactory remedial actions are not taken or if a violator fails to respond, a second letter is sent giving 10 days to correct the violation(s). If a violator has been repeatedly cited for noncompliance or continuously fails to respond to the Agency's correspondence, escalated enforcement is pursued.

Adequate enforcement authority is critical because research has shown that exposure to sources of ionizing radiation can be harmful to humans (see Finding I, page 17). Although it is impossible to predict whether a particular low-dose exposure to an individual will cause damage, it is extremely important to reduce the amount of radiation received by the public to levels as low as reasonably achievable. Consequently, the X-ray and radioactive materials programs must enforce standards that lessen unnecessary exposures. Failure to enforce these standards in a timely manner could result in increased occurrences of cancer and genetic damage.

The X-ray Program's Enforcement
Actions Could Be Stronger And
Documentation Improved

In certain instances, the X-ray program should consider stronger enforcement practices. A random sample of the registration files revealed

limited enforcement activity. Of the 250 X-ray files drawn in the random sample, none contained inspections that resulted in escalated enforcement actions. Because of poor documentation of enforcement actions, it is often difficult to distinguish between lack of action and undocumented action. Two cases are presented to illustrate instances in which stronger enforcement actions may have been merited, and in which documentation of actions was poor.

Case 1

On September 17, 1980, a veterinary clinic's X-ray machine was cited for two items of noncompliance. One item of noncompliance involved insufficient filtration in the primary X-ray beam. The second concerned the beam diameter, which was found to project beyond the "area of clinical interest." Both items of noncompliance resulted in a higher dosage of radiation than Agency standards allow. After two enforcement letters were sent by the Agency, the facility's owner, on November 26, 1980, informed the Agency that the machine would not be used until the repairs were made. The facility was subsequently contacted by the Agency on the following dates: February 3, 1981; April 1, 1981; and May 4, 1981. In all three instances the facility's owner claimed that the machine was not in use and would not be used until it was repaired. The facility's file contained no further reference to the machine's status.

On November 10, 1981, ARRA conducted a routine inspection of a second veterinary facility with the same owner as the first. The machine cited at the first facility and repeatedly reported by the registrant as being stored was found in use and was cited for the same two items of noncompliance as before. The inspection report clearly mentions the fact that this was the same machine as cited in the September 17, 1980 inspection. However, a standard enforcement letter was sent to the registrant with no mention of the previous cites of noncompliance or the false statements made by the registrant to the Agency.

Comment: Although the registrant apparently made false statements to the Agency concerning the status and use of the X-ray machine, no enforcement actions were taken by the Agency. When informed of the case, the program manager stated that he did not believe at the time that additional enforcement was called for because the situation did not merit such action. Because the Agency took no enforcement action in this case, the registrant was successful in using false statements to continue the use of substandard equipment.

Case 2

On December 1, 1981, a medical facility was cited for two items of noncompliance. One item concerned radiation output from an X-ray machine that exceeded Agency standards and had been cited on the previous inspection. Three days later, a letter was sent to the facility giving the registrant 30 days to correct the items. A one-page inspection sheet dated January 6, 1982, indicated that the radiation output problem did not exist, but did not explain why. A notation on this sheet further indicated that the physician who owned the facility was given the name of a repair service and a possible solution to the remaining items of noncompliance. There was no other correspondence in the file until May 12, 1982, when the Agency sent a letter notifying the facility that it was "now in compliance with Agency regulations . . .," more than 5 months after it was cited.

Comment: In this case, 5 months elapsed before ARRA concluded that the registrant took necessary remedial action. During this time, although the Agency has stated that the registrant's progress was monitored and communication was maintained, nothing was documented in the files. In this case, poor documentation make it impossible to determine what actions were actually taken.

Radioactive Materials Follow Up And Documentation Of Enforcement Actions Could Be Improved

The radioactive materials program could improve its follow up and documentation of enforcement actions. A random sample of 70 program licensing files revealed cases in which the reinspection of licensees found in noncompliance was untimely and the documentation of enforcement actions was deficient. The Nuclear Regulatory Commission (NRC) also found the program's documentation of enforcement actions to be inadequate. In addition, the random sample identified the untimely transmittal of enforcement letters.

Cases Illustrate Untimely Enforcement and Incomplete Documentation - The random sample identified instances in which enforcement actions, in the form of follow-up inspections, were untimely and the documentation of these actions was deficient. The following cases illustrate these points.

Case 1

In September of 1982, ARRA conducted a routine inspection of a medical facility. One item of noncompliance was cited, involving

a failure to leak test a radium-226 source.* The licensee had been cited for this violation in the two previous inspections, in 1977 and 1979. The licensee's response to the enforcement letter from the Agency was regarded as unsatisfactory by Agency personnel and a reinspection was scheduled for January of 1983. However, in November of 1982 the licensee corresponded with the Agency informing it that he could not get his radium source leak tested and asked if Agency personnel knew of anyone who might want to buy the source.

The next and last item that appears in the file is an X-ray compliance inspection report dated August 10, 1983, almost 11 months after the original violation was cited. During a routine X-ray inspection, the inspectors were requested by the facility's staff to survey the radium source. The inspectors were informed by the staff that approximately 1 year earlier a private consultant had found the source to be leaking and advised the licensee to dispose of the source. However, due to a "breakdown of the system," the consultant never returned to dispose of the source. The X-ray inspectors found the source to be leaking excessively. The radioactive materials program manager was contacted and, according to the X-ray report, conducted an inspection to determine the extent of possible contamination. However, there is no report in the file concerning the program manager's inspection of the facility.

According to an Agency official, the radium source was properly disposed of in a low-level radioactive waste disposal site in May of 1984, 20 months after the initial inspection citing the violation. However, when the file was reviewed, there was no documentation of this fact. The excessive time elapsed because there was some difficulty in finding an authorized disposal site and the licensee did not want to pay the approximately \$650 to have the source disposed of properly.

Comment: The Agency failed to conduct timely follow-up inspections of the facility and adequately document all relevant occurrences and information. Because the Agency's actions were untimely, the licensee's source leaked excessive amounts of radiation for at least 1 year. This resulted in the licensee's employees and the public being exposed to unnecessary levels of radiation. Additional information provided by the Agency suggests that the excessive radiation levels observed by the X-ray inspectors were due to the misplacement of a lead shield. This information was not found in the licensee's file, and further indicates a failure to document all relevant information.

* Leak tests are conducted to ensure that a sealed source is not releasing radioactive material. The failure to perform adequate and timely leak tests can result in contamination of the surrounding environment.

Case 2

ARRA conducted an initial inspection of an industrial licensee on October 21, 1980. Four items of noncompliance were cited, including failure to perform leak tests and unauthorized place of use and storage. After receiving two enforcement letters, the licensee responded for the first time on January 8, 1981. After an undocumented meeting with the licensee, the items of noncompliance were cleared on March 2, 1981, more than 4 months after they were cited.

On September 15, 1982, a routine inspection was conducted. Three items of noncompliance were cited, including unauthorized individuals using radioactive materials and failure to perform leak tests. The Agency transmitted an enforcement letter on November 24, 1982, 70 days after the inspection.

According to a file memorandum from the program manager dated February 18, 1983, a telephone conference was held with a representative of the licensee on February 11, 1983, 79 days after the Agency sent the 30-day enforcement letter. The representative was the licensee's new radiation safety officer and was unfamiliar with the licensee's previous violations. However, the representative stated he would respond to ARRA immediately outlining the licensee's steps to correct the items of noncompliance.

Comment: On May 15, 1984, the file was reviewed as part of the random sample. Since the Agency had taken no actions on the three items of noncompliance, the file's status was brought to the attention of the radioactive materials program manager. A follow-up inspection was conducted on May 24, 1984, 15 months after the violations had been cited. Six items of noncompliance were cited, four of which had been cited on either one or the other of the two previous inspections.

Case 3

During a 12 month period, from March of 1981 through March of 1982, a hospital licensee experienced difficulty with the disposal of its radioactive waste and the loss of a radioactive implant source. Agency reports in the licensing file identify problems with the hospital's radiation safety program, including inadequate radiation surveys* and insufficient instructions to all employees regarding the handling and disposal of radioactive

* A survey is an evaluation of the production, use, release, disposal or presence of sources of radiation under a specific set of conditions to determine actual or potential radiation hazards.

materials. One report concludes: "Although the radiation surveys and swipe tests performed by the inspector indicated that the radiation levels were safe at the time of inspection, the licensee, at present, has a substandard radiation safety program."

ARRA radioactive materials inspectors conducted four separate inspections of the facility over a 4 month period, with the last inspection occurring on March 23, 1982. Two items of noncompliance were cited, one of which involved the failure to properly train personnel in radioactive implant therapy. The second item concerned the failure of a committee, required by licensure, to meet and address the radiation safety activities agreed to in the hospital's radioactive materials license. At the time of the file survey, 26 months had elapsed since the facility was last inspected.

Comment: Despite the obvious problems affecting the hospital and the extraordinary attention paid by the Agency to the licensee in 1982, a follow-up inspection of the facility had not been conducted by the time of the file survey. Many of the actions taken by the licensee to improve its radiation safety program merited close observation by ARRA. These observations would have ensured the proper completion of these actions by the licensee and its radiation safety program.

The NRC Found Inadequate Enforcement Documentation - In its 1984 annual review, the NRC also noted the program's failure to adequately document enforcement actions. It commented:

"In interviewing inspectors and examining the results of a follow-up inspection in the files, it was determined that the Agency had verbally ordered a licensee to take certain actions to be in compliance. These actions were never documented and the enforcement documentation was not issued until the completion of a follow-up inspection."

The NRC's recommendation was that:

". . . any enforcement action taken by the ARRA be documented fully in the file at the time of the enforcement action. This issue is especially important in light of the new civil penalty authority recently granted to the Agency."

In a second comment, the NRC states:

"Some inspection reports reviewed did not document investigation and close out of previous items of noncompliance."

Its recommendation was that:

". . . the inspection form be modified to show investigation and close out of previous items of noncompliance. We feel this is necessary for maintaining a history of the licensee's performance."

The Agency's Enforcement Actions Could Be More Timely - The program's enforcement actions are not always timely. In the random sample, the average number of days that elapsed between the date of inspections with items of noncompliance and the transmittal of enforcement letters by the Agency was greater than Agency standards. Of the files drawn in the sample in which enforcement letters were sent since January 1, 1981, the average number of elapsed days was 40, while Agency standards call for a maximum of 30 days. Although some enforcement letters were sent in as few as 4 days, the transmittal of several letters exceeded 60 days.

NRC representatives believe the delay in the transmittal of enforcement letters reduces the Agency's ability to properly enforce rules and regulations and protect public health and safety.

The NRC, in its most recent review, also noted the untimeliness of the Agency's enforcement actions. In its report the NRC comments:

"In the review of the compliance file, there were several instances of delays in taking enforcement action. These delays ran up to four months."

The NRC recommended "that the ARRA establish a tickler file to ensure prompt enforcement actions in accordance with the ARRA routine procedure."

Enforcement Philosophy Could Be More Aggressive

Two factors have produced weak enforcement actions. The Agency's ability to conduct enforcement actions has been affected by the problems in its inspection program. However, when problems are identified a lenient enforcement philosophy has affected the actions that are taken.

As outlined previously (see page 17), ARRA has not conducted inspections in a timely manner. Since enforcement activities are an integral part of each inspection program, this failure affects the programs' enforcement effectiveness.

However, another factor producing weak enforcement is the Agency's enforcement philosophy. The X-ray compliance program operates with the philosophy that it is imperative to maintain a good working relationship with its registrants. This stems from a belief that a trend toward more escalated enforcement activity would be counterproductive. An Agency official stated that he fears a more stringent enforcement policy would alienate registrants and result in political retribution by medical and dental lobbying groups. In addition, he stated that the program depends on registrants' cooperation during inspections. This is particularly true in hospital inspections, where inspectors are dependent upon hospital staff to clear rooms and set up procedures to simulate normal usage of equipment. The official concluded that aggravated registrants can significantly hamper the inspection process.

Although this philosophy might benefit the X-ray compliance program's ability to conduct inspections with little resistance from registrants, it reduces the Agency's ability to properly carry out its statutory mandate to protect public health and safety from excessive exposure to radiation sources. It should be pointed out, however, that there has been considerable improvement in the program's attitude toward enforcement in recent years. Violations that would not have resulted in action several years ago are now actively pursued. Further improvement is needed however.

As illustrated by the case examples, the radioactive materials program has been lax in its follow up and documentation of enforcement actions. According to the program manager, in the past a greater emphasis was placed upon conducting inspections and less upon pursuing enforcement actions. Although an effort is being made to correct this philosophy, the programs' turnover and Palo Verde Nuclear Generating Station activities have hampered the process.

Coordination With Medical
Boards Could Be Improved

Agency coordination with the State's various medical boards could be improved. X-ray compliance program inspectors are in an ideal position to observe instances in which medical practitioners use techniques that expose patients to excessive levels of radiation. However, ARRA has no authority over these practitioners. A.R.S. §30-671.A mandates that:

"Radiation protection standards adopted in rules and regulations promulgated by the agency under this chapter shall not be construed to limit the kind or amount of radiation that may be intentionally applied to a person or animal for diagnostic or therapeutic purposes by or under the direction of a licensed practitioner of the healing arts."

In addition, A.R.S. §30-672.D mandates that:

"Persons licensed in this state to practice as a dentist, chiropodist or veterinarian or licensed in this state to practice medicine, surgery, osteopathy, chiropractic or naturopathy shall not be required by the agency to obtain any other license for the use of an X-ray machine but are governed by their own licensing acts."

ARRA personnel report that inspectors have noted instances in which practitioners expose patients to radiation levels exceeding established norms. The program manager stated that in these cases the inspector on the scene informally recommends a course of action. Subsequent inspections show that while some practitioners heed inspectors' advice, others do not. The program manager stated that if a registrant ignores an inspector's advice, he would consider contacting the relevant medical board. However, officials from the Medical, Osteopathic, Dental and Chiropractic Boards report that they receive no correspondence from the Agency regarding radiation practices. All have expressed interest in being notified of cases that the X-ray program cannot resolve informally.

A regular line of communication between the Agency and the State's medical boards could improve public health and safety. The X-ray program should pursue a policy in which interested medical boards are routinely contacted when their licensees do not conform to contemporary standards for radiation exposure.

CONCLUSIONS

The Arizona Radiation Regulatory Agency's enforcement actions have not always been as strong or timely as was warranted. Problems in the Agency's inspection program are compounded by the Agency's lenient enforcement philosophy. These factors have adversely affected the X-ray compliance and radioactive materials programs' ability to conduct and adequately document enforcement actions in a timely manner. Finally, ARRA could improve its lines of communication with the State's medical boards.

RECOMMENDATIONS

1. The Agency should pursue stronger enforcement actions in those cases that merit such action.
2. The Agency should ensure that licensing and enforcement actions are adequately documented.
3. The Agency should communicate with the various State medical boards when practitioners repeatedly expose patients to radiation levels exceeding established norms.

FINDING III

THE ARIZONA RADIATION REGULATORY AGENCY HAS NOT RECEIVED NUCLEAR EMERGENCY MANAGEMENT FUNDS SUFFICIENT TO COVER THE COSTS OF ITS PALO VERDE ACTIVITIES

The Arizona Radiation Regulatory Agency (ARRA) has not received adequate funding from the Nuclear Emergency Management Fund (NEMF) to finance the costs of its Palo Verde Nuclear Generating Station involvement. Because ARRA's Nuclear Emergency Management Fund appropriations have paid only part of its Palo Verde costs, the Agency has financed a significant portion of these activities with its General Fund appropriation. The Arizona Division of Emergency Services, the NEMF administrator, has had a negative impact on ARRA's Palo Verde cost recovery. In addition, the Nuclear Emergency Management Fund appropriations are not in line with the statutes.

The Nuclear Emergency Management Fund was established in 1981 to provide funding for administering and enforcing the State plan for off-site response to emergencies caused by accidents at commercial nuclear generating stations. ARRA is entitled to NEMF financial assistance for its Palo Verde Nuclear Generating Station (PVNGS) activities. A.R.S. §26-306.01 states that the annual assessment levied against those engaged in constructing or operating a commercial nuclear generating station was established:

". . . to provide for the development and maintenance of a state plan for off-site response to an emergency caused by an accident at a commercial nuclear generating station and to provide for the equipment, personnel, facilities, training and testing necessary to comply with criteria for preparation and evaluation of radiological emergency response plans and preparedness in support of commercial nuclear generating stations prescribed by the United States nuclear regulatory commission and the federal emergency management agency."

ARRA Has Significant
PVNGS Responsibilities

ARRA's emergency response and environmental surveillance activities are crucial to the Palo Verde Nuclear Generating Station's* Nuclear Regulatory Commission (NRC) operating license. Without ARRA's support, the State would not be able to satisfy the Federal Emergency Management Agency's (FEMA) response requirements and, hence, the NRC would not issue an operating license for PVNGS. According to NRC and FEMA officials, although ARRA's response capability is not the only factor considered when a license is issued, an operating license will not be issued if ARRA cannot effectively fulfill its PVNGS responsibilities. ARRA's ability to carry out its PVNGS functions was evaluated by FEMA during an exercise held in May 1983. According to a FEMA official, ARRA responded quite well during this exercise and would be able to protect the public health, safety, and welfare in the case of an off-site release from PVNGS. ARRA is responsible for providing radiological technical assistance during a PVNGS emergency. The Agency's responsibilities, aimed at minimizing the adverse health effects from an accident at PVNGS, were established in light of the NRC's "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants."(NUREG 0654) ARRA's PVNGS functions include the initial and ongoing evaluation of the potential radiological consequences from a release of radioactive materials outside PVNGS and the protective action recommendations to minimize radiation dose. ARRA also recommends actions to control radiation in food chains and water supplies.

ARRA staff has expended a considerable amount of time to fulfill its PVNGS obligations. In fiscal years 1983 and 1984, the staffs of two ARRA programs spent at least 70 percent** of their time on PVNGS (see Table 7). In fiscal year 1983 the radioactive materials and X-ray programs

* PVNGS is being constructed 55 miles west of Phoenix by a consortium of public utility corporations and is scheduled to go on-line in 1985. The managing agent for PVNGS is Arizona Public Service Company.

** Time devoted to PVNGS was determined by reviewing Agency time sheets. According to ARRA officials, staff have not always consistently recorded the time spent on PVNGS. For this reason, PVNGS percentages are considered by ARRA to be conservative estimates.

staffs devoted approximately 13 percent of their efforts towards PVNGS, while 17 percent of the administrative and support personnel time was spent on PVNGS activities. For fiscal year 1984 PVNGS activities for these programs and the support staff have decreased. However, as staff prepare for the September 1984 FEMA Exercise Evaluation, Agency officials expect that PVNGS activities will increase. Officials estimate that during years when FEMA evaluations are held, approximately every 2 years, 10 percent of the radioactive materials, X-ray, and support staff time will be devoted to PVNGS. This time cannot then be devoted to these ARRA programs.*

TABLE 7
TIME SPENT ON PVNGS

| <u>ARRA Program</u> | <u>FY 1983</u> | <u>FY 1984</u> |
|----------------------------|----------------|----------------|
| Emergency Response | 81.5% | 71.8% |
| Environmental Surveillance | 70.6 | 76.9 |
| Radioactive Materials | 13.3 | 3.0 |
| X-ray | 12.4 | 3.5 |
| Administrative/Support | 17.0 | (1) |

Source: Compiled by Auditor General staff from ARRA time sheets

(1) Less than 1 percent

ARRA Has Paid For A Considerable
Portion Of Its PVNGS Activities
With General Funds

Although entitled to NEMFs, the Agency has used General Funds to pay for many of its PVNGS costs. NEMF appropriations have not been adequate to cover all PVNGS expenses. This has occurred partly because ARRA has neither tracked all of its actual PVNGS costs nor summarized the time spent on PVNGS.

* Diversion of resources from radiation protection programs is common to states with nuclear generating stations. In a report prepared by the National Governor's Association it is noted that the necessity for state and local governments to participate in emergency preparedness exercises is consuming vast amounts of staff time, to the detriment of other aspects of states' radiation protection programs that provide substantial protection to the public.

NEMF Appropriations Insufficient - Because NEMF receipts have not been adequate, the Agency used General Funds to cover PVNGS costs in fiscal years 1983 and 1984. Projections for fiscal year 1985 also indicate that ARRA's 1985 NEMF appropriation will not pay for all its PVNGS activities.

NEMF appropriations have not been sufficient to cover 100 percent of PVNGS costs for fiscal years 1983 or 1984.* In fiscal year 1983 ARRA received \$337,270 from the NEMF; however, ARRA expended approximately \$94,700 more than its appropriation, as shown in Table 8. For fiscal year 1984 it is estimated that ARRA will expend \$70,100 for PVNGS from its General Fund appropriation. The State has paid for at least \$164,800 of the PVNGS activities in fiscal years 1983 and 1984. The total of General Funds used for PVNGS is likely even greater than this amount since the personnel totals are considered by ARRA to be conservative and the analysis performed does not include fiscal years 1981 and 1982.

* The Agency has received NEMFs since 1981; however, the approximate cost of its PVNGS activities prior to fiscal year 1983 cannot be determined because ARRA did not record PVNGS personnel time. Based on Agency estimates of time expended on Palo Verde it has been determined, though, that NEMF assistance did not exceed costs incurred.

TABLE 8

NEMF ASSISTANCE AND PVNGS EXPENDITURES

| | <u>FY 1983</u> <u>PVNGS Cost</u> | <u>NEMF</u> <u>Assistance</u> | <u>FY 1983</u> <u>Difference</u> | <u>FY 1984</u> <u>PVNGS Cost</u> | <u>NEMF</u> <u>Assistance</u> | <u>FY 1984</u> <u>Difference</u> |
|---|-------------------------------------|----------------------------------|-------------------------------------|-------------------------------------|----------------------------------|-------------------------------------|
| Personal Services and Employee-Related Expend. | \$197,700 | \$ 5,000 | \$(192,700) | \$150,500 | \$ 59,800 | \$(90,700) |
| Training/Travel | | | | | | |
| In-State | 2,300 | | (2,300) | 4,100 | 11,200 | 7,100 |
| Out-Of-State | 10,900 | 19,000 | 8,100 | 8,300 | 20,100 | 11,800 |
| Other Operating Expenditures | 71,000 | 41,900 | (29,100) | 53,300 | 48,900 | (4,400) |
| Equipment | <u>171,000</u> | <u>271,400</u> | <u>100,400</u> | <u>69,900</u> | <u>93,000</u> | <u>23,100</u> |
| Totals | <u>\$452,900</u> | <u>\$337,300</u> | <u>\$(115,600)</u> | <u>\$286,100</u> | <u>\$233,000</u> | <u>\$(53,100)</u> |
| Carry-Forward From Prior Fiscal Year | | | \$ 26,900 | | | \$ 11,500 |
| Carry-Forward To Next Fiscal Year | | | (11,500) | | | (40,000) |
| NRC Environmental Surveillance Contract | | | <u>5,500</u> | | | <u>11,500</u> |
| Total PVNGS Expenditures Paid With General Funds | | | <u>\$ 94,700</u> | | | <u>\$ 70,100</u> |

Source: Compiled by Auditor General staff from NEMF funding requests for fiscal years 1983 and 1984, ARRA time sheets, ARRA internal accounts payable ledgers and other miscellaneous expenditure documentation

Personal services* and employee-related expenditures** constitute the major portion of the net deficit. In fiscal year 1983 ARRA employees spent 31 percent of their time on PVNGS. ARRA expended \$192,700 more for salaries and employee-related expenditures than it received from the NEMF. For fiscal year 1984 ARRA's projected personnel costs for its PVNGS activities are \$90,700 greater than NEMF receipts for personnel. In addition, ARRA has not recovered all its PVNGS-related other operating expenditures from the NEMF.

NEMF appropriations for equipment*** expenditures have offset some of ARRA's PVNGS personnel costs and other operating expenditures. The partial compensation is due to the fact that equipment purchased with NEMFs is not used only for PVNGS. ARRA has purchased state-of-the-art laboratory and emergency response equipment with its NEMF appropriations. Much of it can be used for radiation protection programs other than PVNGS. Similarly, two vehicles purchased with NEMFs are available for projects and emergencies not related to PVNGS. In fiscal year 1983 ARRA received approximately \$100,400 more than the equipment expenditures attributable to PVNGS. For fiscal year 1984 the NEMF appropriation was \$23,100 greater than the actual PVNGS equipment costs.

ARRA may not recover all its fiscal year 1985 PVNGS costs from the NEMF. ARRA's 1985 NEMF appropriation is \$102,800. Additionally, ARRA has declared a \$20,000**** carry-forward from its 1984 NEMF appropriation and projected that \$20,000 more will be brought forward into fiscal year 1985.

* These expenditures were determined by applying each employee's hourly wage against the time recorded for PVNGS.

** 20 percent of the PVNGS personal services expenditures was used to determine PVNGS-related employee related expenses. The Agency average is 22 percent.

*** Equipment costs were obtained by determining the projected use for PVNGS activities over the equipments' expected life and applying this figure against the purchase price of an item. This method incorporates the consideration that equipment purchased with NEMFs is also used for other purposes.

**** The carry-forward does not represent a real savings in personnel costs for PVNGS. The carry-forward resulted from vacancy savings for two PVNGS dedicated positions funded with NEMFs.

Thus, ARRA will have \$142,800 available for 1985 PVNGS activities. \$60,000 of the allocation is for personnel costs. Calculations based on Agency estimates for fiscal year 1985 indicate that ARRA will expend approximately \$250,000 on salaries and employee-related expenditures for PVNGS activities. Moreover, ARRA officials acknowledge that the appropriation will not be sufficient to cover PVNGS-related costs for expendables, equipment calibration and mobile facility maintenance. The undeclared carry-forward will be used to cover fiscal year 1985 PVNGS-related training and travel costs, along with minor equipment repair. These items were cut from ARRA's initial NEMF request, but are necessary to maintain ARRA's PVNGS response capability.

PVNGS Expenditures Not Known - ARRA has not tracked actual PVNGS expenditures. Because ARRA has not summarized its actual PVNGS costs or time spent on PVNGS, it has underestimated its NEMF requests. Maricopa County and the Texas Department of Health provide methods for cost tracking. By recording actual PVNGS costs, ARRA would have better justification for its NEMF requests.

Although, ARRA monitors its NEMF expenditures, it has not recorded actual PVNGS costs. Presently, ARRA's NEMF requests are based on the operating expenditures and equipment needs of the emergency response and environmental surveillance programs, along with minimal funding for personnel. However, in some cases NEMFs are used to pay equipment and travel expenditures that relate partially or completely to other programs (see equipment and travel expenditures on Table 8, page 45). By contrast, personal services and employee-related expenditures for ARRA's PVNGS activities are much greater than the personnel costs paid with NEMFs. According to ARRA officials, ARRA has never recorded actual PVNGS costs. ARRA has recorded time spent on PVNGS, however, this information has not been summarized. Because ARRA has not recorded its actual PVNGS costs or compiled PVNGS time, ARRA has operated without full knowledge of the financial impact and the diversion of resources that PVNGS has had on the Agency. Consequently, ARRA has not requested sufficient funds from the NEMF to pay for PVNGS activities.

ARRA initially requested \$209,100 for PVNGS-related personnel and operational needs. However, calculations based on ARRA estimates for fiscal year 1985 PVNGS personnel support indicate that ARRA will incur \$250,000 for this item alone. If ARRA had calculated the total PVNGS personnel costs from its time records, the Agency would have known its request would not be sufficient to cover its costs.

ARRA could utilize methods developed by Maricopa County Civil Defense and Emergency Services (MCCDES) and other states to track costs attributable to nuclear generating station activities. MCCDES uses a monthly time report to summarize personnel time for PVNGS. Applying salary figures to the time spent allows Maricopa County to determine actual personnel costs for PVNGS. All other expenditures directly attributable to PVNGS are coded as such. By using this method, Maricopa County has complete, up-to-date information for all PVNGS expenditures.

The Texas Department of Health uses a time allocation method for tracking actual personnel expenditures associated with nuclear generating station activities. According to Department of Health officials, employees charge their time and travel to specific activity codes. Other operating expenditures are allocated accordingly and equipment costs are prorated based on usage. Utilizing this method, Texas' Department of Health is able to summarize the costs associated with its nuclear generating station activities.

ARRA's NEMF requests should be developed by projecting total costs for the upcoming year. If ARRA tracked and summarized its actual PVNGS expenditures, it would have stronger documentation for its NEMF requests. Expenditures should be fully justifiable in terms of relating to Palo Verde and protecting the public health, safety and welfare. All personnel expenditures for PVNGS should be projected and the appropriate number of full-time equivalent positions should be requested from the NEMF to cover actual costs. Equipment costs for PVNGS should be prorated based on projected PVNGS use to ensure that the utility consortium pays only the actual cost attributable to PVNGS activities. Other operating expenditures should include not only the emergency response and environmental surveillance programs' costs but also a portion of the

rest of ARRA's other operating expenditures. Projections for other operating expenditures can be based on a percentage of personnel time for PVNGS. By utilizing actual cost figures and projecting the next year's needs, ARRA's NEMF requests would be developed to finance 100 percent of ARRA's PVNGS activities.

Arizona Division Of Emergency Services
Has Not Requested Sufficient NEMFs For ARRA

ARRA has also not recovered all PVNGS costs partially because the Arizona Division of Emergency Services (ADES) has not requested sufficient funds from the Legislature. ADES has not fulfilled its NEMF statutory obligation to consider all governmental costs of developing, maintaining and supporting the State plan. NEMF appropriations should be determined at the legislative level.

ADES is the lead agency and has the overall primary responsibility for development of a State plan for off-site response to an emergency caused by an accident at a commercial nuclear generating station. ADES is required to develop the plan in consultation with the following State agencies:

1. Radiation Regulatory Agency
2. Commission of Agriculture and Horticulture
3. State Dairy Commissioner
4. Department of Health Services
5. Department of Public Safety
6. Department of Transportation
7. Office of Economic Planning and Development
8. Division of Military Affairs within the Department of Emergency and Military Affairs
9. Arizona Corporation Commission
10. Any other agencies or offices deemed necessary by the Division of Emergency Services

ADES is required by A.R.S. §306.01.B. to make an annual recommendation to the Legislature of ". . . an amount necessary to develop, maintain and support the state [nuclear emergency response] plan." It is the opinion of the Legislative Council that this requires the director of ADES to include a reasonable estimate of all costs attributable to other State and local agencies, together with ADES' own costs, in the annual overall amount recommended.

ADES Violated Statutory Requirements - ADES has not complied with statutory requirements for the assessment on commercial nuclear generating stations. ADES has not recommended an amount sufficient to cover the costs of ARRA's PVNGS activities or the costs to Maricopa County and other State agencies.

Despite statutory requirements, ADES' recommendations to the Legislature have not included a reasonable estimate of ARRA's PVNGS costs to support the State plan. In fiscal year 1983, ARRA expended \$192,700 more than it received from the NEMF for PVNGS personnel costs. For example, in that year ARRA's request for administrative services support was decreased by \$5,000. ADES also deleted funds for staff and monitor training, items that had to be financed with General Funds. For fiscal year 1984 it is projected that ARRA will use General Funds to cover at least \$90,700 in personnel expenditures. ADES decreased ARRA's NEMF request for personal services assistance by \$13,100. In addition, according to ARRA officials a former director of ADES imposed requirements for several years that no personnel costs were to be funded.

In addition to not requesting sufficient funds for ARRA's PVNGS costs, ADES has not included reasonable estimates of all the costs of all the agencies involved in the State's emergency response plan. MCCDES has worked on PVNGS emergency response plans since 1975, however, NEMF assistance was not provided until 1983. According to an ADES official, a former director of ADES refused to recognize that Maricopa County was an eligible NEMF participant. MCCDES officials estimate that MCCDES expended \$300,000 on PVNGS planning efforts before receiving NEMF assistance.

Presently, Maricopa County is included in the NEMF requests, however, the funds received have not been adequate to pay all of Maricopa County's PVNGS costs. For fiscal year 1983, Maricopa County received \$86,600 in NEMF assistance. MCCDES officials stated that an additional \$14,800 was expended in fiscal year 1983 in support of PVNGS emergency response activities. For fiscal year 1984 Maricopa County received \$32,000 in NEMF assistance, however, MCCDES officials estimate that an additional \$57,600 was spent for PVNGS as of May 1984.

Finally, ADES has also not included in its recommendations the costs to many State agencies for the Radiological Emergency Assistance Team monitors. The monitors assist ARRA in performing PVNGS off-site environmental surveillance duties. There are 26 monitors from several State agencies including the Department of Health Services, the Agriculture and Horticulture Commission, the Office of the State Chemist, the State Land Department, the State Agriculture Laboratory, and the Corporation Commission. According to an ARRA official, monitors spend up to 1 week each year on PVNGS.

ADES' 1985 NEMF Recommendation Was Influenced by APS' Budget - ADES improperly considered APS' NEMF budget for the fiscal year 1985 recommended assessment. ARRA will have to use General Funds to cover fiscal year 1985 PVNGS costs, partially because ADES limited the assessment recommendation based on APS' budgetary constraints.

ADES' 1985 NEMF recommendation to the Legislature was improperly based on APS' NEMF budget projections. APS' emergency planning organization had a budget of \$300,000 for the annual assessment and told ADES that emergency planning officials would have to meet with top level consortium management if the recommendation was greater than \$300,000. Not wishing to create a problem for APS' emergency planning organization, ADES kept the total assessment recommendation below \$300,000.

ARRA officials do not feel that the 1985 NEMF appropriation will be sufficient to cover all of the Agency's PVNGS costs. ARRA's initial 1985 NEMF request, which probably was not sufficient to cover all PVNGS costs,

included \$209,100 for personnel and operational needs and \$41,000 for future equipment replacement. The future equipment replacement monies were deleted, according to an ADES official, because the PVNGS consortium has not agreed to a mechanism for this process. An APS official said that APS would prefer to deal with equipment replacement on a piece-by-piece basis as the equipment breaks down. ARRA would rather establish a fund for equipment replacement so the funds are available when they are needed.

In addition to not being able to establish an account for equipment replacement, ARRA officials were forced to cut other necessary funds from the NEMF request. ARRA officials were told of the \$300,000 limit on funds available for the NEMF and were asked to decrease the NEMF request to a minimum level. This \$122,800 budget developed by ARRA will result in a funding deficiency for some PVNGS operational requirements, according to ARRA officials. The budget, which includes only \$60,000 for personnel costs, will not be adequate to cover the \$250,000 projected for personnel expenditures.

Maricopa County officials also feel that the 1985 NEMF allocation will be inadequate to cover County PVNGS costs. Maricopa County initially requested \$184,000 from the NEMF, however, ADES decreased its recommendation to \$83,800. According to the director of MCCDES, some PVNGS training and exercise personnel costs will have to be absorbed by the County. Similarly, supplies needed for PVNGS activities will have to be purchased with County funds. The \$300,000 funding limit contributed to a funding shortfall, which will have to be made up by public funds.

ADES violated A.R.S. §26-306.01.B. by limiting the recommended assessment to an amount budgeted by APS. In a memorandum dated May 25, 1984 (see Appendix, page A-1), the Legislative Council stated:

"[t]here is no allowance for considering the expenses to or financial condition or any other interest of the power plant consortium in either recommending or setting the amount of the appropriation and assessment. These commercial considerations are

irrelevant to the purpose of the appropriation and assessment. The government does not dicker with the taxpayer over the amount of taxes it levies. A taxpayer cannot hamper the taxing power of sovereignty by inserting itself in the taxing process, except as allowed by law, and the government may not bargain its taxing power. Constitution of Arizona Art. IX, sec 1. Thus insofar as the ADES recommendation of an amount of appropriation and assessment reflects an amount bargained and agreed to by and for the expediency of the consortium rather than the amount of the governmental costs of developing, maintaining and supporting the state plan . . . the ADES negotiations violate legislative expectations, the statutes, and the state constitution."

Legislature Needs Complete Information - The Legislature does not have adequate information to determine the amount that ARRA and other agencies should receive from the the NEMF. By receiving complete information regarding the State's nuclear emergency response needs, the Legislature will be able to determine the appropriate NEMF level.

The Legislature needs complete information for the State's nuclear emergency response efforts. ADES, as advisor to the Legislature, should ensure that the amount recommended is sufficient to cover the States nuclear emergency response efforts. According to the Legislative Council, "[t]he legislature is only required to 'hear' ADES' recommendation and may legally accept, reject, ignore, or modify the recommendation."

The decision to use General Funds to support PVNGS activities should be made at the legislative level in accordance with statutory provisions governing the NEMF. If the Legislature receives recommendations sufficient to cover the total costs of the State's nuclear emergency response capabilities, it can then determine the NEMF appropriation and corresponding assessment. For this reason, agencies receiving NEMFs need to track all actual PVNGS costs and be prepared to present this information to the Legislature. This historical data will enable the Legislature to make an informed decision regarding the assessment and the NEMF appropriation.

NEMF Appropriations Not
In Line With Statutes

The Legislature has seen the need to allocate NEMFs directly to ARRA due to past problems between ADES and ARRA. The statutes provide for ADES' use of the NEMF to administer and enforce the nuclear emergency response plan, however, since 1982 the Legislature has decided to allocate NEMFs directly to participants.

The NEMF statute, A.R.S. §26-306.02, provides for ADES' use of the Fund. According to the statute, ADES has a continuing appropriation to use the fund for "administering and enforcing the state plan for off-site response to an emergency caused by an accident at a commercial nuclear generating station."

In recent years the Legislature has allocated NEMFs directly to participants. Since 1982 the legislature has overridden the general statute by enacting session laws. This practice was started when problems developed between ADES and ARRA. From fiscal year 1981 through part of 1983, ARRA's NEMF-related claims were handled by ADES. In some cases, there were disagreements between ADES and ARRA over the payment of claims. In addition, a former director of ADES allegedly used some NEMFs for purposes not related to PVNGS.* By allocating NEMFs directly to ARRA, the Legislature ensured that ARRA would get all of its NEMFs. If the Legislature intends to continue the practice of allocating NEMFs directly to participants, the Legislature may wish to consider revising the NEMF statute.

* The NEMF was not tested during the 1983 performance audit of the Department of Emergency and Military Affairs, Division of Emergency Services. However, inappropriate expenditures and improper transfers were found in the State and Federal funds that were tested.

CONCLUSION

ARRA has not received NEMFs adequate to cover the costs of its PVNGS activities. ARRA has used General Funds to finance a significant portion of its PVNGS activities. ARRA has not recovered all PVNGS costs because it has not tracked its actual PVNGS costs and ADES has not requested sufficient funds from the Legislature. Additionally, NEMF appropriations have not been made in line with the NEMF statutes.

RECOMMENDATIONS

1. ARRA should account for and summarize its actual PVNGS expenditures. This information should be used in developing and justifying ARRA's NEMF requests.
2. ADES should comply with the provisions of A.R.S. §26-306.01. The assessment recommendation should be a reasonable estimate of an amount adequate to cover all costs of all agencies involved in nuclear emergency response activities. The Legislature should consider requiring ADES to submit the agencies initial requests along with the recommended budget.
3. The Legislature may wish to consider amending A.R.S. §26-306.02.B to provide for NEMF allocation directly to participating agencies, bringing the statute in line with the present appropriation process.

FINDING IV

ARIZONA RADIATION REGULATORY AGENCY'S X-RAY PROGRAM COULD BE IMPROVED

Arizona Radiation Regulatory Agency's (ARRA) X-ray registration needs to be reformed and strengthened. The X-ray program would operate more productively if registration were enforced and coordinated with fee collection. The registration process would be further improved if the Agency's authority over installers of radiation equipment were clarified.

Agency Management Of Registration Is Inadequate

ARRA's registration process is not operating adequately. The Agency's rules and regulations require that all radiation equipment be registered. Machine locations are often unknown because the Agency does not enforce this requirement. As a result of this failure, the fee collection process is unnecessarily inefficient. The X-ray program would be more productive if registration were enforced and coordinated with fee collection.

The Agency has the statutory authority to register radiation machines. A.R.S. §30-672.B states:

"The agency may require registration . . . of . . . sources of radiation if it has been determined necessary to protect public health and safety."

The Agency has incorporated this provision in its rules and regulations, which require that:

"The owner or person having possession of any radiation machine shall apply for registration of such machine with the [Radiation Regulatory Agency] within thirty (30) days after acquisition of such machines."

Registration provides necessary information to the X-ray program. It compiles data on the number, type and location of radiation machines, from which inspection priorities are determined. The frequency in which facilities are inspected, for example, varies according to the number and type of machines used. Further, in order for machines to be inspected at

all, the Agency must know their locations. Consequently, registration is essential for an effective inspection program.

Although a registration period is not stipulated in the Agency's rules and regulations, it has become accepted X-ray program practice to register machines for 4 years. Machines can be registered any time during the year and expiration dates are usually assigned to be exactly 4 years after the registration date.* Therefore, expirations occur randomly throughout the year.

The introduction of fee collection in fiscal year 1983 increased the importance of registration data. The fee a facility is charged is based upon the number of machines owned. This information is obtained from the registration files. Although fee collection and registration are closely related, Agency management has not recognized the need for greater coordination between the two functions. Fees are due from all X-ray registrants in January every year. They provide the State with revenues of approximately \$89,000** a year. The annual fee for radiation machines is currently \$20 per machine.

Machine Locations Are Often Unknown - The current registration process is not operating effectively. Under the present system, the number and kind of machines a facility is operating is often unknown until the time of its next inspection. This is the result of registrants not being held responsible for properly registering their machines.

Under the current system, with its 4 year registration period, machine registrations often expire and are not renewed by the owners. The Agency does not monitor expiration dates, which occur randomly throughout the

* There is one common exception to this 4 year rule. Recently, the Agency has tried to have the registration of all the machines operated by a given facility expire on the same date. Consequently, facilities with more than one machine could have the expiration date of a newly purchased machine assigned to correspond with the date of its other machines.

** The Agency collects approximately \$140,000 annually from all fee collections. The remainder is from radioactive materials licensing fees.

year, and does not usually send renewal notices to registrants. As a result, X-ray machines often remain unregistered until renewed by an inspector at the time of a facility's next inspection.

Similarly, the movement or disposition of X-ray machines and new acquisitions of machines are usually not reported to the Agency by registrants. One facility tripled the number of machines it had but did not notify the Agency and register the new machines. Consequently, the Agency was unaware of the new acquisitions until the facility's next scheduled inspection.

The reason for this problem is that X-ray machine owners are not held responsible for the registration and renewal of their machines. Nonregistration and other related violations are not considered noteworthy by the Agency, even though A.R.S. §30-673 makes it unlawful to operate an unregistered machine. When inspections reveal unregistered machines or unreported machine movement, inspectors do not record the violations in their reports. On the contrary, instead of considering nonregistration a violation, inspectors have been assuming the responsibility of registering machines for the owners. For example, a review of 250 facilities' files showed that 133 of them had at least one instance in which an X-ray machine was not registered until after an inspection. This means that facilities can repeatedly operate unregistered X-ray machines for long periods of time without fear of any enforcement action. Stronger enforcement of existing requirements is needed to alleviate this problem.

Fee Collection Is Unnecessarily Inefficient - Inadequate registration and a lack of coordination has reduced the efficiency of fee collection. Fee related follow-up work is directly attributable to inaccurate registration files. The X-ray program would be more productive if registration were strengthened and combined with fee collection.

Inaccurate registration files unnecessarily add to the time and manpower needed to complete annual fee collection. Registration, with its 4 year renewal period, and fee collection are not coordinated since Agency

management has not recognized their interrelationship. Because information from the registration files, often inaccurate, is used to prepare fee billings, registrants are often billed incorrectly. As a result, follow-up work is often necessary.

The X-ray program manager calculated that the equivalent of .4 full-time employees out of a staff of four inspectors was devoted to fee collection in fiscal year 1983. Much of this time involved fee related follow-up work. This included tracking registrants with unreported address changes; reconciling, by phone, differences between the number of machines registrants claimed to have and the number the files indicated; and updating the files. Because of their unfamiliarity with the X-ray program, the involvement of the clerical staff in this follow-up work was very limited. Fee collection required considerable follow-up work again in fiscal year 1984. The process will continue to be unnecessarily inefficient until the program's registration problem is addressed.

Combining registration with fee collection would improve productivity. Louisiana and Nevada, for example, coordinate the two functions and report that their inspectors are not involved in any follow-up work. Louisiana's program, which collects fees annually, requires its registrants to denote on the fee form the machine changes that have occurred since the previous billing. Registrants, therefore, are responsible for reconciling billing discrepancies themselves. This is true with Nevada's program as well. In addition, Louisiana and Nevada both use the threat of enforcement action to deter intentional misinformation.

The Agency should conduct machine registration and fee collection simultaneously. Both the Agency's enabling legislation and its rules and regulations refer to fees as registration fees. One form could be designed on which the data necessary for registration and reporting of dispositions were recorded and a fee calculated. This form should require registrants to make any needed corrections themselves, and to attest to the accuracy of information contained therein. This form could be sent annually to all registrants of record. In this way, registrants would be

responsible for the registration of their own machines and payment of attendant fees. In addition, inspectors would verify registration data during routine inspections. Intentional misrepresentation or repeated nonregistration should result in an enforcement action.

Further, the process would operate more smoothly if registration and fee assessments were staggered throughout the year.* Other Arizona regulatory agencies use this technique. In this manner, the X-ray program's registration and fee collection work load would be systematically spread over the entire year. With registration renewals coming due regularly, the Agency would find it useful to assign specific clerical personnel to the X-ray program. Familiarity of assigned clerical staff with the X-ray files and system would increase efficiency of fee and registration processing and would provide a valuable resource to assist inspectors in their day-to-day functions.

Inspectors should not be involved in the fee collection process, except to verify the number of registered machines during routine inspections. This would free highly trained inspectors to concentrate more on the technical aspects of their job, such as performance of inspections. In addition, this would separate the fee collection and inspection processes, strengthening internal control.

Machine Installations Should Be Reported To The Agency

The Agency should be informed when radiation machines are installed. Installation data is an important check which ensures that radiation machines are registered and inspected in a timely manner. The current statutes do not allow the Agency to require installation data from installers.

* For example, renewal dates could be spread over 12 months based on the first letter of the registrant's name, or on the month in which machines were originally registered.

Notification Requirements Are Important - The Agency needs to know when installers equip facilities with radiation machines. Installers are people who assemble, sell, lease or transfer radiation machines. Installers are currently the Agency's primary means for determining whether new facilities are registering their machines. Prompt registration is necessary because inspections of new facilities are a high priority. The initial survey of a facility's radiation shielding and equipment is the single most important inspection it will receive. Overall, data on machine and facility locations is necessary for an effective inspection compliance program.

The Agency has no system to ensure that all installations are reported. For example, although the program reports that a significant number of machines manufactured before 1974 are installed within the State, the Agency receives very few installation reports for these machines. Machines manufactured after 1974 are Federally certified and installation reports must be sent to the Federal Food and Drug Administration. The Agency benefits from this because copies of these Federally required reports are frequently sent to the Agency by installers. However, there are no Federal requirements for machines manufactured before 1974. These older machines pose a greater risk to public health and safety because manufacturing standards were less stringent.

Many cases were found in which there was no evidence of installers reporting installations for new facilities. Consequently, if any owner failed to voluntarily register a new facility, it could operate without the Agency's knowledge for a significant period of time.

The Agency Lacks Statutory Authority - The Attorney General's Office, during the process of updating the Agency's rules and regulations, concluded that the Agency does not have the statutory authority to regulate installers. Traditionally, the Agency has used A.R.S. §30-673 as its legal basis to regulate this group:

"It is unlawful for any person to receive, use, possess, or transfer any source of radiation unless registered, licensed or exempted by the agency in accordance with this chapter and rules and regulations adopted under this chapter." (emphasis added)

According to the Attorney General's Office this statutory reference is insufficient. The Agency's Attorney General representative wrote that:

". . . there is no Arizona law which authorizes ARRA to require registration, reports, or anything else from [installers] unless they happen also to be the owner of [a] radiation source. The Arizona statutes impact solely upon persons who own, possess or use materials and equipment that are a source of radiation.

Although one might argue that an X-ray equipment sales company owns or possesses radiation machines prior to their sale, I would not attempt to regulate such possession unless the company has the equipment set up and in operable condition. Similarly, one might argue that a serviceman 'uses' a source of radiation when he operates it for testing purposes and therefore is subject to (some kind of) licensure . . . However, the courts take a pretty restrictive view of any attempts . . . which might restrict entry into an occupational field, or which purports to regulate its members, unless clearly authorized by statute. No such authorization is found in the statutes you administer." (emphasis added)*

Requirements for installation information are considered important by other states. Eighteen of 19 states polled, with programs similar to Arizona's, have notification requirements. Further, the "Suggested States' Regulations for Control of Radiation" compiled by the Conference of Radiation Control Program Directors, the Nuclear Regulatory Commission, the Environmental Protection Agency, and others, contains a section for regulating installers. The publication recommends that state programs include a requirement that installers notify the agency within 15 days of the name and address of people who receive machines; the manufacturer, model, and serial number of each machine; and the date of transfer of each machine.

* The Agency does not wish to use its regulatory authority to restrict entry into the installers' occupational field.

Colorado, in fact, has a requirement that uses installers to ensure that machine users are aware of their obligation to register. The rule requires that:

"Prior to the sale, lease, transfer, or loan of any radiation machines which are to be used in this state, any distributor, retailer or other agent shall require a written statement that the buyer . . . is registered or has applied for registration under the provisions of these regulations."

The Agency should have the authority to require installation reports from installers of radiation equipment. The Agency should then maintain a file history of installer's reports, so it may monitor compliance and maintain a system for keeping an up-to-date listing of installers within the state.

CONCLUSION

ARRA's X-ray registration process is not effective or efficient. The X-ray program's productivity would improve if registration were enforced and combined with annual fee collection. The process would be further improved if the Agency's authority over installers were clarified.

RECOMMENDATIONS

1. The fee collection process and registration functions should be combined into one annual process. Fees should be regarded as payment for registration.
2. Registrants should be held responsible for registering their own machines and paying attendant fees. The Agency should take enforcement action against repeat violators.
3. Registration renewal dates should be staggered throughout the year to spread out the work load. Clerical help should then be specifically assigned to the X-ray program to handle registration and fee collection activities. Inspectors should not be involved in fee collection.

4. The Legislature should consider amending the statutes to require installer reporting. The Agency should maintain an up-to-date listing of all installers in the State and should track each installer's reporting history to monitor compliance.

OTHER PERTINENT INFORMATION

During the audit we developed pertinent information in the following two areas: 1) license and registration fees, and 2) other states' systems for funding nuclear plant related activities.

License And Registration Fees

License and registration fees have become an alternative source of revenue for many radiation control programs. The Nuclear Regulatory Commission was required by law in 1952 to generate sufficient fees to become self supporting in its regulatory programs. At least two state programs, Washington and Florida, rely upon licensing and registration fees to recover 100 percent of their program costs, while many other state programs recover up to 50 percent of their program costs from fees.

The Arizona Radiation Regulatory Agency (ARRA) has collected licensing and registration fees since January 1, 1983. A.R.S. §30-672.I directs the Agency to:

"... prescribe by rule and regulation a schedule of fees for issuing licenses and registering radiation sources under this chapter in amounts necessary to cover a significant portion of reasonable expenses incurred in processing the licensee's application and the costs to the agency of employing consultants and persons possessing technical expertise. The agency shall deposit all funds in the radiation regulatory license and registration fund under A.R.S. §30-674."

The fees are administered by the Agency under authority granted by A.R.S. §30-674, which states:

"Fees received under this chapter shall be paid to the state treasurer who shall place such fees in a special fund known as the radiation regulatory license and registration fund."

"Monies deposited in such fund shall be exempt from the provisions of [A.R.S.] §35-190.*

"All monies deposited in such fund shall be expended in administering the provisions of this chapter."

The Agency began collecting licensing and registration fees during the last half of fiscal year 1983. During the 6-month period, more than \$165,000 was collected in fees. No restrictions were placed on the expenditure of the fees beyond the enabling legislation, and the Agency was able to expend the revenues generated from the fees as well as its General Fund appropriation. However, the fees were not used to administer the X-ray compliance and radioactive materials programs, but rather accumulated in the License and Registration Fund.

During fiscal year 1984, the Agency collected approximately \$134,000 of licensing and registration fees. However, unlike the previous fiscal year, the Legislature placed restrictions on the use of the revenues generated from the fees. A footnote to ARRA's fiscal year 1984 appropriation legislation required the Agency to exhaust the Licensing and Registration Fund before expending General Fund monies. Once again, however, the fees were not used to administer the programs, but were allowed to accumulate in the License and Registration Fund. There appears to be considerable confusion within the Agency as to why the fees were not expended as directed by the legislation.

The footnote requiring the expenditure of license and registration monies prior to General Fund monies appears in the Agency's fiscal year 1985 appropriation legislation as well.

Since January 1, 1983, the Agency has collected approximately \$300,000 in licensing and registration fees. As of July 20, 1984, the License and Registration Fund balance was approximately the same as the amount of fees collected by the Agency over the previous 18 months.

* A.R.S. §35-190 requires, in part, that funds appropriated to an agency by the Legislature for one fiscal year not be carried into the next fiscal year, but rather revert to the General Fund.

To resolve the current problem, the Department of Administration, General Accounting Office (GAO) has proposed a transfer of expenses previously charged by the Agency against its General Fund appropriations to the License and Registration Fund of an amount equal to the Fund balance. GAO officials undertook this task at the close of fiscal year 1984, thereby eliminating the Fund balance and reimbursing the General Fund for inappropriate expenses charged by the Agency against the General Fund. GAO will repeat the process at the close of fiscal year 1985 so the General Fund can be reimbursed for charges made against it by the Agency in the current fiscal year.

A possible solution to the overall problem has been suggested by the Executive Budget Office and would be implemented for the fiscal year 1986 budget. Its plan requires the Agency to estimate annually the revenue generated by license and registration fees. Once the Agency's budget needs for the fiscal year are determined, its General Fund appropriation would be reduced by the amount of estimated fee revenues. This alternative would allow the agency to use the fees as a revenue source and comply with the enabling and appropriation legislation.

Other States' Systems For Funding Nuclear Plant Related Activities

In Arizona, the Nuclear Emergency Management Fund (NEMF) was established to provide funding from utilities for the State's nuclear generating station emergency preparedness activities. The NEMF is administered by the Arizona Division of Emergency Services (ADES). ADES reviews and revises the budget requests from the Arizona Radiation Regulatory Agency and Maricopa County. ADES submits a yearly NEMF recommendation to the Legislature. Historically, ADES' recommendations have not been sufficient to cover 100 percent of Arizona's costs (see page 49). Many states have alternative methods for handling utility assessments and assistance allocations for nuclear generating stations. Some states recover 100 percent of their costs from nuclear generating station operators. This has been done in a few states by billing the utility for actual expenditures, while other states have established an annual statutory fee.

Some states receive full funding for their nuclear generating station emergency response and environmental surveillance activities. Florida, Illinois, California, Washington, and Texas all recover 100 percent of their emergency response and environmental surveillance costs from the operators of nuclear generating stations. Pennsylvania recently enacted legislation that will require full cost recovery for its nuclear generating station activities.

Rather than attempting to project costs for emergency response and environmental surveillance, some states bill nuclear generating station operators for the actual costs incurred. Texas and California are two states that recover nuclear generating station costs in this manner. In both states the actual costs incurred are financed with general funds; the utilities reimburse the General Fund. This method allows the states to recover 100 percent of the costs incurred without having to project these costs before the start of the fiscal year.

Statutorily established fees are used in a few states to collect funding from nuclear generating station operators. This method, used in Illinois and Pennsylvania, frees the agencies from yearly negotiations with utilities for emergency preparedness funding. Because these states are primarily maintaining their emergency preparedness capabilities rather than developing their programs, yearly funding requirements are relatively stable. The fee structures established are adequate to cover 100 percent of the maintenance costs. In addition, both states have a one-time fee for new facilities to cover preoperational start-up costs. Fees are deposited into an operating account which the agencies use as necessary. The stability of funding allows the agencies to plan for the long term.

Some states, like Arizona, coordinate utility funding through one agency, however, in other states each agency is responsible for its own funding request. Rather than coordinate nuclear generating station funding requests through one agency, Florida and Arkansas permit each agency to request funds independently of the other participants.

AREAS FOR FURTHER AUDIT WORK

During the course of our audit we identified one potential area for further audit work. Due to time and staffing constraints we were unable to review this area, which was considered a lower priority than those areas we did review.

- Are the Arizona Radiation Regulatory Agency's (ARRA) fee schedules adequate?

A.R.S. §30-672.I requires the Agency to prescribe a schedule of fees that would provide ". . . amounts necessary to cover a significant portion of reasonable expenses incurred in processing the licensee's application and the costs to the agency of employing consultants and persons possessing technical expertise." This concept provides for the Agency to recover its costs from those who are subject to the regulation and who most directly benefit from it. ARRA's director estimates that 30 to 40 percent of inspection, registration and licensing costs are currently recovered from fees. Other states rely heavily on user fees to recover licensing and inspection costs. In spite of this, professional associations (particularly doctors and dentists) oppose ARRA's fees. In addition, the Agency appears to be unclear about the appropriate fee level and its role as a fee collector. Further audit work is necessary to determine the relationship between Agency costs and the fees it charges, and to determine the fairness of current fee schedules.



Bruce Babbitt
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November 5, 1984

Mr. Douglas R. Norton
Auditor General, State of Arizona
111 West Monroe, Suite 600
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Dear Mr. Norton:

The Office of the Auditor General second draft performance audit of the Arizona Radiation Regulatory Agency (ARRA), received on October 31, 1984, has been reviewed by the appropriate Agency staff. The following responses are considered to be germane to particular comments in the audit.

1. Auditor General (AG) Comment: Summary, ¶3, lines 2 and 3. "Inspection activities could be improved. The Agency does not conduct all its inspections in a timely manner."

ARRA Response: The statement is considered to be basically correct. The high turnover of technical staff and subsequent required training of new inspectors coupled with the Palo Verde Emergency Response program demands are considered to be the prime reasons for the backlog of inspections. Computer terminals have been procured to enter the X-Ray and Radioactive Materials program information in order to correct the "timeliness" deficiency. It should be also noted that the Conference of Radiation Control Program Directors' guidelines recommend a staff of eight for the X-Ray program; which is twice the staff currently in the ARRA program.

2. AG Comment: Summary, ¶6, line 1. "The Agency should pursue stronger enforcement action in cases that merit such actions."

ARRA Response: Arizona (ARRA) has established a Civil Penalty Program that is being vigorously enforced. The Civil Penalty regulation approved by the Attorney General's office in June 1983 is one of the first, if not the initial, state regulations to assess monetary penalties for noncompliance

action. Accordingly, Arizona is one of the few states that currently utilize this strong enforcement action. Numerous Severity Level 2 and 3 noncompliances have been issued to licensees and registrants. A recent Severity Level 1 non-compliance resulted in a \$3,000.00 civil penalty. It should be noted that the Severity Level 2 and 3 noncompliances allow correction of the problem within thirty (30) days without a civil penalty.

3. AG Comment: Summary, ¶6, lines 4, 5, and 6. "the Agency should communicate with the appropriate State Medical Board when a practitioner is found to repeatedly expose patients to levels exceeding established norms."

ARRA Response: The Agency has provided copies of correspondence to appropriate medical boards when significant radiation problems that were not corrected have been detected in the medical community.

4. AG Comment: Summary, ¶7, lines 7, 8, 9, and lines 13, 14, 15. "ARRA has not adequately tracked its Palo Verde related costs and therefore, has been underestimating these costs." "ARRA has financed more than \$160,000 of its Palo Verde costs over the past 2 years with its General Fund appropriation."

ARRA Response: ARRA has maintained individual timesheets for Palo Verde related work and accurately documented equipment, training and operational requirements related to the Palo Verde emergency response and environmental surveillance program. The \$160,000 is principally related to personnel costs over a 2 year period. It should be noted that reductions have occurred in the submission of past Agency requests to ADES for incorporation into the emergency response fund. Also, a previous Director of ADES imposed requirements that no "personnel costs" were to be funded for several of the annual requests. The Agency will continue to approximate personnel, equipment, training and operational costs related to Palo Verde and submit same.

5. AG Comment: Summary, ¶9, lines 3 and 4. "The effectiveness and efficiency of the X-Ray machine registration and fee collection process could be improved."

ARRA Response: Concur. The fee collection billing process was computerized during the last year. The Agency will prepare amended statutes to submit to the Legislature requiring radiation machine installers to report all installations to the Agency.

6. AG Comment: Summary, ¶9, lines 8, 9, 10 and 11. "the registration function is not coordinated with the fee collection process. Fees are due annually in January but registrations take place anytime throughout the year."

ARRA Response: The January-due fees are for renewals only. New fees are paid, based upon quarterly proration of annual fee amounts, at the time of new registrations. Therefore, this process does not indicate inefficiency.

7. AG Comment: Summary, ¶10, lines 3 and 4; also page 64, Recommendation #3, last line. "Inspectors should not be involved in fee collection."

ARRA Response: Inspectors are not involved in the collection of fees--only in the assessment of fees. When fee amounts are questioned, inspectors are asked to confirm the accuracy of the assessment.

8. AG Comment: Page 6, Table 2.

ARRA Response: The FY 1982-83 and FY 1983-84 Totals, shown to be in excess of \$1,000,000, are misleading. The amount of the collected license/registration fees, totalling \$304,600 is not available to expend. The appropriation limit is required to be the maximum spending level for the Agency. Specifically, the Agency's budget was \$935,200 during FY83-84, not \$1,239,800 as inferred. Funding available to the Agency has been reduced significantly these past years.

9. AG Comment: Page 16, ¶2, lines 4 and 5. Reference to "inspections being conducted within 30 days of installation."

ARRA Response: This is an optimum ideal goal subject to ongoing program priorities and staffing.

10. AG Comment: Page 16, ¶4, lines 7 and 8. "Although the NRC's criteria are meant to be the minimum level of inspection frequency, the Agency had recently changed from its own more stringent criteria to a version of the NRC's criteria."

ARRA Response: The "more stringent criteria" referred to was a proposed schedule calling for maximum intervals between routine inspections ranging from six months to 18 months. This schedule was adopted by the Agency in January 1983, but due to personnel turnover and the demands of Palo Verde and regulation revision, could never be effectively followed. The Program Manager had hoped to follow the schedule after the situation stabilized, but it proved unworkable. On the advice of the NRC, the schedule was abandoned in favor of one based on the new NRC schedule of January 1, 1983.

11. AG Comment: Page 17, ¶1, lines 20 and 21. "ARRA must adopt strong inspection and enforcement programs if the public is to be properly protected from such hazards."

ARRA Response: The quality of licensee inspections and licensing has improved greatly as a result of a reduction in

personnel turnover. Several licensees have progressed to the final stage of notification prior to actual fining and one licensee has been fined as of this date.

12. AG Comment: Page 17, ¶2, lines 6 and 7. "In addition, the radioactive materials program has experienced difficulty in conducting timely inspections of licensed radiation source users."

ARRA Response: The inability to provide timely inspections has been the direct result of high personnel turnover, low salary rates and necessity of required Palo Verde Emergency Response drills.

13. AG Comment: Page 18, ¶1.

ARRA Response: There is no mention of the special inspection studies (NEXT-DENT-BENT-BRH Level II's) which have an effect on the overall priority inspection guides. In an effort to make efficient use of inspectors, travel time, and expenses, every effort is made to coordinate these studies with the routine inspections which in some instances alters the timeliness of inspections.

14. AG Comment: Page 20, last ¶, lines 2, 3 and 4. "A random sample of the radioactive material licenses identified numerous instances in which excessive time elapsed between the inspections of licensed users."

ARRA Response: The Radioactive Materials Program does not consider all licensed activities using radioactive materials to be equally hazardous. When a situation arises in which the completion of all scheduled inspections is not possible, a priority system is used to direct the inspection effort towards more hazardous activities. Thus, the majority of the "excessive time" instances involved activities of low priority, many of which are not routinely inspected by the NRC. Relatively few of the referenced incidents involved high priority licensees.

The program uses the following criteria in establishing priorities and schedules:

- a. Every licensed activity should be inspected routinely, normally at intervals of not to exceed three years.
- b. Licensees whose licensed activities pose relatively greater hazard should be inspected at shorter intervals than licensees whose activities pose relatively small hazard.
- c. The inspection schedule used by the Agency should meet or exceed the NRC requirements for all classes of licensee.

- d. In addition to routine inspections, follow-up and reinspections of licensees should be conducted in the case of numerous or serious violations.
 - e. Inspections are a time-consuming intrusion on the licensee's business, and although they should be thorough and timely, they should not be so excessive in number as to pose an unreasonable burden on the licensee.
15. AG Comment: Page 21, ¶3, lines 3, 4, 5 and 6. "Although NRC criteria require an inspection of each hospital at a minimum of once every 24 months, the Agency believes that the potential hazards warrant an inspection of hospitals at a minimum of once every eighteen months."

ARRA Response: The "NRC criteria" (NRC Materials Inspection Categories and Priorities, January 1, 1983) require routine inspections at intervals of not more than two years for large hospital facilities (such as facilities with teletherapy, research institutions, university hospitals) to not more than five years for smaller institutions (community hospitals offering limited nuclear medicine services). The Agency schedule (except for the 1983 proposed "18-month" schedule) sets intervals of one to three years for similar programs. The analysis by the Auditor General's staff does not appear to give appropriate account to the differences in levels of hazard associated with various licensee activities as a basis for prioritizing inspections. The finding is valid, however, the Agency has identified occasional instances of failure to direct inspection effort towards high priority overdue inspections.

16. AG Comment: Page 22, Table 5.

ARRA Response: While Table 5 does show that ARRA had trouble in meeting inspection frequency criteria, it also shows that the Agency has significantly improved inspection frequency.

17. AG Comment: Page 22, Table 5, ¶3, lines 2 and 3. "In the most recent audit, the NRC calculated the backlog of all inspections at 10 to 25 percent."

ARRA Response: Even with significant personnel turnover, retraining and emergency response requirements, the 10 to 25% ARRA backlog is still less than exists in other state programs.

18. AG Comment: Page 23, ¶1.

ARRA Response: Generally speaking, this paragraph is true. However, the ARRA priority for inspections of large radiopharmaceutical users, e.g. hospitals and industrial radiographers, are higher than other licensees due to increased potential health hazards.

19. AG Comment: Page 24, ¶3.

ARRA Response: Generally speaking, in 1980 when the new Agency was established, all x-ray facilities were due for inspection and selective scheduling was not performed. For efficiency reasons and overall program effectiveness, the program performed the maximum number of inspections possible with available resources.

20. AG Comment: Page 24, ¶4, lines 2, 3, 4 and 5. "Although an 18 month inspection schedule has been created, it fails to identify overdue inspections, repeat violations and follow-up inspections in a timely manner."

ARRA Response: Identification of overdue inspections, repeat violations and necessary follow-up inspections will be greatly enhanced through establishment of the licensee data base. Establishment of the data base has been severely impacted by the lack of funds for expanding computer capabilities and hiring of additional clerical support personnel.

21. AG Comment: Page 26, ¶2 and ¶3.

ARRA Response: "Staff turnover has reduced inspection frequency" is a true statement. However, the Radioactive Materials Program is currently fully staffed with what appears to be a stable group of proficient personnel which has already provided a positive impact in solving the inspection frequency problem. Even with full staff the X-Ray program would be operating at 50% of the recommended staffing requirements recommended by the C.R.C.P.D.

22. AG Comment: Page 27, ¶5, lines 1, 2 and 3. "PVNGS exercises have reduced the amount of time available for inspections in both X-Ray and Radioactive Materials programs."

ARRA Response: PNVGS exercises have impacted significantly on the Radioactive Materials Program's ability to meet inspection and licensing requirements. A significant portion of time is expended for orientation, training and drills needed to support the program.

23. AG Comment: Page 28, ¶2. "The inspection activities of the Arizona Radiation Regulatory Agency could be improved. Scheduling practices, staffing problems and the Palo Verde Nuclear Generating Station activities have adversely affected the X-Ray Compliance and Radioactive Materials Programs' ability to conduct inspections in a timely manner."

ARRA Response: The Agency feels that merely counting the number of inspections addresses only half of the inspection program. The quality of the inspection effort must also be addressed. Particularly in the Radioactive Materials

Program, substantial improvement in the effectiveness of the inspections has been a prime focus. Extensive training and the development and use of detailed inspection guides have resulted. As an example, the checklist used by inspectors at hospital facilities prior to 1982 consisted of 24 items on three pages, while the current checklist has nearly 150 items on 12 pages. The greater effort per inspection, however, reduces the time available for the number (and thus the frequency) of inspections. This trend toward quality inspections exists with the NRC and other states.

24. AG Comment: Page 29, ¶1, lines 3, 4 and 5. "ARRA X-Ray and Radioactive Materials enforcement actions have been weak and untimely in some instances."

ARRA Response: The previous ARRA response under items 1 and 2 are applicable to this question.

25. AG Comment: Pages 30, 31 and 32. Reference to X-ray enforcement actions.

ARRA Response: At the time of these inspections the only escalated enforcement action available in the Agency's regulations was the impounding of radiation sources and/or injunctive proceedings. None of the two cases cited were deemed to warrant the use of either radical course of action.

Case No. 1: Human exposure was not involved.

Case No. 2: (a) Human exposure was not in excess of regulation limits (inspection conducted 1/6/82); (b) Contact by telephone with the machinist who was designing and manufacturing the complicated retrofit modifications for the 50-year-old piece of equipment was frequent and consequently the documentation of the telephone conversations was not all recorded in the file. Also, the on-site inspection conducted at about 80% completion of the modification process was also not documented. The reason for the so-called long delay was the modifications made to the equipment plus the doctor's one-month vacation.

26. AG Comment: Page 32, ¶1, lines 6, 7 and 8. "... the reinspection of licensees found in noncompliance was untimely and the documentation of enforcement actions was deficient."

ARRA Response: a) Reinspection of licensees has been severely hampered by personnel stability, staffing levels, PVNGS drills and an extended high-priority radioactive material response (Re-Bar Incident); b) Documentation of enforcement actions has been discussed with legal representatives of the Attorney General and a closer, more thorough processing of licensee inspection and noncompliance letters has been implemented by the Radioactive Materials (RAM) Program

Manager. Also, a closer look at communications with licensees is being implemented to insure that all pertinent exchanges are being documented; c) It should also be noted that the ability to impose a civil penalty on licensees has only been in place since mid-1983.

27. AG Comment: Page 33, Case 1, ¶2, lines 10 and 11. "The X-Ray inspectors found the source to be leaking excessively."

ARRA Response: The X-Ray inspector observed radiation levels outside of the storage safe that were higher than expected. The Radioactive Materials inspection disclosed that an extra lead shield on the inside of the safe was not in its proper place. When put in the proper position, radiation levels were reduced to normal. Tests were conducted to check for radioactive material leaking out of the safe. No deposits of contamination were found.

- ARRA Response: The previous ARRA response under items 1 and 2 are applicable to this question.
28. AG Comment: Page 33, Case 1, ¶3. "According to the Program Manager, the radium source was properly disposed of in a hazardous materials disposal site in May of 1984, twenty months after the initial inspection citing the violation. However, when the file was reviewed, there was no documentation of this fact. Excessive time elapsed because there was some difficulty in finding an authorized disposal site and the licensee did not want to pay the approximately \$650 to have the source disposed of properly."

ARRA Response:

- a. The source was disposed of at the Hanford, Washington low-level radioactive waste disposal site, seventeen months after it was discovered to be leaking. The violation cited was failure to conduct a leak test. When the leak test was conducted in December 1982, the leak was discovered. The delay in disposal was primarily the result of the fact that radium waste was not accepted at any low-level waste disposal site after about 1978 until a reinterpretation of NRC rules in 10CFR Part 61 allowed Hanford to accept radium waste in early 1984.
- b. The documentation was not in the file. Delay in timely completion of reports was caused by personnel turn-over (including turnover of secretarial staff not addressed by the Auditor General report) and the interruptions caused by other activities (regulation revision, the rebar incident, Palo Verde drills, NRC audit, and Auditor General audit).
- c. The first estimates of disposal costs to the physician exceeded \$2,000. The cost was reduced to a final cost

of \$650 through the efforts of the private consultant who was able to arrange for the disposal.

29. AG Comment: Page 33, Case 1, ¶4, lines 3, 4, 5 and 6.
"Because the Agency's actions were untimely, the licensee's source leaked excessive amounts of radiation for at least one year. This resulted in the licensee's employees and the public being exposed to unnecessary levels of radiation.

ARRA Response:

- a. The source did not leak "excessive levels of radiation." Due to the misplacement of an extra shield, slightly increased levels of radiation existed outside of the lead-lined storage safe. The Radioactive Materials inspectors were unable to confirm the observations of the X-Ray inspector, who apparently took readings using an instrument designed for x-rays, and which probably over-responded to the higher energy gamma rays from the radium source. The source actually leaked trace amounts of radioactive material, of which no quantity was found to have escaped from the shield surrounding the source.
- b. The public was not "exposed to unnecessary levels of radiation". As a result of the misplaced shield, some of the licensee's employees may have been exposed to radiation levels higher than they would have received otherwise, but there is no basis to suspect that these exposures exceeded the levels established by ARRA or NRC regulations. The Agency would have preferred a more rapid disposal of the source. This was not possible, however, due to conditions beyond the control of the Agency or the licensee. The source was isolated in a lead-shielded safe as the best alternative. The lack of timely documentation in the file is a problem the Agency is moving to resolve.

30. AG Comment: Page 35, last comment (bottom of page).

ARRA Response: Currently, previous items of noncompliance are being carefully closed out to insure that escalated enforcement actions may be taken if warranted.

31. AG Comment: Page 39, Recommendation No. 1. "The Agency should pursue stronger enforcement actions in those cases that merit such action."

ARRA Response: Due to problems with the certification of the civil penalty regulations by the Attorney General's Office, Article 12 of the Agency's regulations was not available for use until late 1983. One aspect of these regulations is the severity level assessment. Prior to these regulations, all violations of the Agency's rules were effectively equal,

there was only a nonenforceable subjective concept of one type of violation being more severe than another. Further, there was no basis in the regulations for treating repeated violations differently from treating first-time violations.

Since the civil penalty regulations have been adopted, the Agency routinely assesses the severity level of violations, and will concentrate enforcement against the more severe violations. Additionally, the regulations provide for separate handling of repeated violations. As evidence of the Agency's willingness to use these new regulations, it should be noted that the Agency has recently assessed and collected a \$3,000 fine for a Severity Level I release of radioactive materials to the environment in excess of the concentrations permitted by regulations in Article 4.

32. AG Comment: Page 43, ¶2, lines 6, 7 and 8. "ARRA has neither tracked its actual PVNGS costs nor summarized the time spent on PVNGS."

ARRA Response: It's true that ARRA has not summarized costs attributed to staff time spent on PVNGS activities; however, ARRA has maintained cost records of PVNGS related costs exclusive of personal services and employee related expenses.

33. AG Comment: Page 47, ¶1, lines 5, 6 and 7. "ARRA officials acknowledge that the appropriation will not be sufficient to cover PVNGS-related costs for expendables, equipment calibration and mobile facility maintenance."

ARRA Response: Concur. The 1985 appropriation will not adequately cover the expenses necessary in operating a laboratory.

34. AG Comment: Page 47, ¶3, lines 5, 6 and 7. "NEMFs are used to pay equipment and travel expenditures that relate partially or completely to other programs (see table 8, page 45)."

ARRA Response: What programs? This point requires clarification since it is not clear what is referred to in the table.

35. AG Comment: Page 49, ¶2, title. "Arizona Division of Emergency Services Has Not Requested Sufficient NEMFs for ARRA".

ARRA Response: Should be addressed by ADES.

36. AG Comment: Page 51, ¶2, lines 1, 2 and 3. "ADES has also not included in its recommendations the costs to many State agencies for the Radiological Emergency Assistance Team monitors."

ARRA Response: Recouping expenses for monitors is a great idea, but how would this work? The monitor pool is a dynamic force and agency personnel commitments fluctuate. Who would

be tasked to track the time spent by other agency staff--ARRA or each supporting agency?

37. AG Comment: Page 51, ¶2, lines 8 and 9. "According to an ARRA official, monitors spend approximately 1 week each year on PVNGS."

ARRA Response: Only a few monitors spend one week each year; those assigned to participate in the exercise. The remaining majority of the monitors devote only 1-2 days.

38. AG Comment: Page 51, ¶3, title. "ADES Improperly considered APS' NEMF budget for the FY1985 recommended assessment."

ARRA Response: Should be addressed by ADES.

39. AG Comment: Page 52, ¶1, lines 5, 6 and 7. "ARRA would rather establish a fund for equipment replacement so the funds are available when they are needed."

ARRA Response: Concur. ARRA would like to see an equipment replacement fund established.

40. AG Comment: Page 55, Recommendation #1, line 1. "ARRA should account for and summarize its actual PVNGS expenditures."

ARRA Response: ARRA accepts the recommendation; will summarize personnel time spent on PVNGS activities, to include a dollar cost.

41. AG Comment: Page 59, ¶3, lines 5, 6 and 7. "inspections reveal unregistered machines or unreported machine movement, inspectors do not record the violations in their reports."

ARRA Response: The X-Ray program manager has indicated that in the past unregistered machines noted during an inspection are registered and that the registrant is billed for back fees. The violation will be recorded in future inspection reports.

42. AG Comment: Page 68, ¶1.

ARRA Response: The EBO Budget Analyst has repeatedly directed this Agency not to exceed the appropriation limit, which reflects legislative intent that the appropriation limit must be the maximum spending level for the Agency.

43. AG Comment: Page 68, ¶2, line 9. "considerable confusion" regarding fees.

ARRA Response: No confusion exists. The EBO Budget Analyst in agreement with DOA Accounting, has changed directions to this Agency, 1 or 2 times, but each direction regarding the administration of collected license and registration fees has been clear and all ARRA transactions have fully complied with the EBO Analyst's directions.

44. AG Comment: Page 68, ¶4, line 2. The July 20, 1984, fund balance.

ARRA Response: The EBO Analyst and DOA Accounting agreed in early 1984 to have all collected license and registration fees accumulate until the end of FY 1983-84. Therefore, DOA's fiscal-year-end closing transactions did transfer those net collections from both FY 1982-83 and FY 1983-84 during July 1984 to the General Fund.

45. AG Comment: Page 69, ¶1, line 1. "To resolve the current problem."

ARRA Response: No current problems exists for ARRA. DOA Accounting and EBO Budget Analyst reached agreement regarding handling of collected license and registration fees and all ARRA transactions have fully complied with directions from the EBO Analyst and DOA Accounting. This agreement, made in early 1984, is what the report refers herein as a DOA-proposed transfer.

46. AG Comment: Page 69, ¶1, line 7. "inappropriate expenses."

ARRA Response: No expenses were inappropriate. All ARRA transactions regarding the administration of collected fees have fully complied with directions from the EBO Budget Analyst and DOA Accounting. We understand that Accounting described to the AG auditor its difficulty in reconciling the legal prohibition against transfers between funds as opposed to the footnote to ARRA's appropriation legislation.

47. AG Comment: Page 69, ¶2, line 1. "A possible solution to the overall problem."

ARRA Response: The auditor was informed of the impossibility of accurately predicting future fee revenues, especially in light of House Bill 2017, which would have totally eliminate these license and registration fees. The Bill actually passed all referred-to Committees and both Houses of the Legislature and appeared likely to become law until it was vetoed by Governor Babbitt on April 30, 1984 - too late to affect the Legislature's appropriation amounts. The uncertainty of future fee revenues in any year would jeopardize the Agency's ability to rely on a seriously-reduced appropriation.

48. AG Comment: Page 75, ¶2, lines 9, 10 and 11. "The Board has not had the opportunity to review any orders of the director of the Agency because ARRA has not taken any enforcement actions that have resulted in an appeal."

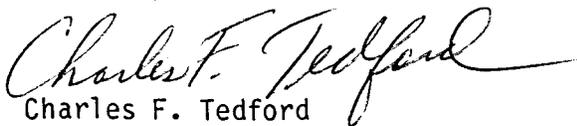
ARRA Response: ARRA has taken numerous enforcement actions to correct items of noncompliance; however, only one action has resulted in a \$3,000.00 civil penalty. This penalty could have been appealed to the Board. Also, the orders issued for corrective actions during the Rebar incident were eligible for appeal to the Board.

Summarization of the Auditor General's performance audit of the Arizona Radiation Regulatory Agency:

1. From an overall viewpoint, the report is objective and well written.
2. Stronger reference could be made to the turnover problems and other reasons impacting the frequency of inspections and delay in the Regulations revisions.
3. From a broad perspective, no objections are interposed to the findings contained in the audit except to the recommendations in Finding IV which will require further assessment by the Agency.
4. No mention is made in the report regarding Agency understaffing problems which were verbally cited on various occasions by the audit team. A simple statement regarding projected additional staff requirements would help in EBO and JLBC future considerations.
5. The Auditor General's review and critique of the Agency's program has been constructive with the intent directed toward improvement of the Agency program.

In conclusion, based on the Agency's five-year achievement record and the performance audit, I believe that the Sunset Review evaluators and the Agency staff are of the opinion that the Arizona Radiation Regulatory Agency has provided a comprehensive radiation health and safety program to the citizens of Arizona. This vitally important service to the public should be continued. There is no question that changes should be made to improve the program's operational efficiency. The Agency will conscientiously strive to achieve the recommended findings.

Sincerely,



Charles F. Tedford
Director

CFT:gej

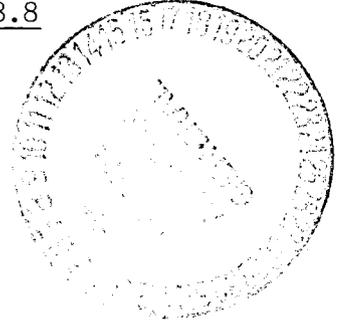
Arizona Public Service Company

P.O. BOX 21666 • PHOENIX, ARIZONA 85036
ANPP-EEVBJr-L84-30947

October 17, 1984

File: 84-001-101
84-001-028.8

Mr. William Thomson, Director
Performance Audit Division
State of Arizona
Office of the Auditor General
111 West Monroe, Suite 600
Phoenix, AZ 85003



Dear Mr. Thomson:

Thank you for giving us the opportunity to review and comment on Finding III of the audit report addressing the Nuclear Emergency Management Fund as it affects the Arizona Radiation Regulatory Agency (ARRA). It is apparent that Finding III resulted from an extensive investigation and review of the accounting and budgeting practices and policies of ARRA as they affect and are affected by planning necessary to respond to nuclear emergencies. We commend the Office of the Auditor General for bringing to light shortcomings in such practices and policies which should be corrected.

For the most part we view the shortcomings revealed in Finding III as symptomatic of problems frequently associated with the development of any new enterprise. This is particularly true with respect to planning for nuclear emergencies where the federal requirements remain in a state of evolution and are subject to almost continuous changes. Under these circumstances it is not surprising that some glitches in accounting and budgeting practices have appeared.

However, while accounting and budgeting are not unimportant, none of us should lose sight of the fact that the performance by ADES and ARRA of their respective emergency functions has been exemplary. Two tests of the State and Local Nuclear Emergency Plans have been conducted to date, the most recent one in September, 1984. The results of these tests have demonstrated that the planning has been good and that ADES and ARRA have the capability of responding to a nuclear emergency in a manner that will preserve the public health and safety.

In this light, we would offer the general criticism that the audit report should acknowledge the fine performance by ADES and ARRA of their assigned functions. Further, we suggest that the draft be carefully reviewed and revised to eliminate intemperate remarks which in our view are unseemly in light of the newness of tasks given to ADES and ARRA and their obviously effective concentration on substantive performance of those tasks. To the extent these suggestions are accepted, the professionalism and acceptance of the final report will be enhanced.

Mr. William Thomson,
Director

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October 17, 1984

It appears to us that Finding III is based on two fundamental precepts:

1. All costs incurred by State agencies in developing the capability to respond to a nuclear emergency, which would not be incurred but for the presence of Palo Verde, should be assessed against the joint owners of Palo Verde through the NEMF.
2. The agencies involved in preparing for such emergency should adopt and implement accounting and budgetary practices which provide a means for demonstrating and controlling such costs.

Arizona Public Service Company (APS), speaking for itself and for the other joint owners of Palo Verde, has no quarrel with either of these precepts. We believe that A.R.S. § 26-306.01, enacted in 1984 with APS' support, contemplated a plan for the full recovery from the owners of commercial nuclear generating stations of all costs of State agencies incurred in preparing for nuclear emergencies which they would not incur in the performance of their other functions. We do not shrink from that ultimate cost responsibility now. Moreover, we are convinced, as we think Finding III demonstrates, that we have fully paid all of the nuclear emergency preparedness costs which have been demonstrated to have been properly incurred.

Obviously, since the ultimate cost responsibility does rest solely upon the joint owners of Palo Verde, we have a keen interest in any measures that can and should be taken to account for and control the costs that are actually incurred. For this reason, we support the provisions in Finding III respecting the accounting and budgeting of costs by ARRA.

At the same time we want to express our view that these recommendations of Finding III do not go far enough.

First, since we, as the joint owners of Palo Verde, will be paying the costs, we have the duty to our respective customers and others of assuring that the costs are prudently incurred to meet the needs of emergency preparedness. Additionally, as licensee of the U.S. Nuclear Regulatory Commission, we are responsible for the coordinated preparedness of all agencies required to cope with nuclear emergencies. Arizona Public Service Company should be given the opportunity to provide input for the coordinated planning required to preserve the public health and safety.

Second, proper work controls and accounting practices must be adopted by all agencies involved so that meaningful budgets can be prepared, costs can be justified and audits can be properly conducted. In the absence of proper work control and accounting practices, neither ADES, the Legislature nor the Palo Verde owners can accurately plan for the true costs involved.

Third, the rules to be applied to ARRA should also apply to all other State agencies involved.

Mr. Williams Thomson,
Director

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October 17, 1984

Fourth, ADES and/or the Office of the Auditor General should establish guidelines for the apportionment of costs incurred for equipment or activities (e.g. training) which are useful in performing dual tasks, i.e., nuclear emergency preparedness and some other agency functions.

Fifth, if given the opportunity to provide input in the development of agency nuclear emergency preparedness budgets and if proper work controls and accounting practices are established, we would support the concept that any shortfalls in the budget for any year should be added to the budget for the subsequent year, just as unexpended budgeted funds should be deducted from subsequent budgets. Adoption of this concept, subject to the conditions mentioned, will assure the full recovery of nuclear emergency preparedness costs from the Palo Verde owners.

Finally, we must take exception to the comment made in Finding III that "no other state will be contributing General Funds for Arizona's emergency response activities." *The comment is both irrelevant and misleading. It is irrelevant, because all of the joint owners of Palo Verde are committed to paying the full costs of emergency preparedness properly attributable to Palo Verde, and we have met this commitment to date. The comment is misleading, because it fails to acknowledge that the joint owners of Palo Verde, including those serving areas outside of Arizona, have already paid into the General Funds more than \$150,000,000 in property, sales, use and other taxes. These tax contributions to the General Funds will continue to grow in the future. Thus, when all three Palo Verde units are in operation, we estimate that the property tax bill alone will be in the neighborhood of \$85,000,000 each year, more than 50% of which will be paid by utilities serving in states outside of Arizona.

Again, we thank you for the opportunity to comment on Finding III. We appreciate your efforts to bring businesslike approaches to the management of the NEMF. If we can be of any assistance to you in such efforts, we will be willing to oblige.

Very truly yours,



E. E. Van Brunt, Jr.
Vice President, Nuclear Production

eg

xc: Don Karner
Bob Page
Mike Crusa

* This statement was deleted from the final draft of the report.



STATE OF ARIZONA

Department Of Emergency And Military Affairs

5636 EAST McDOWELL ROAD
PHOENIX, ARIZONA 85008



BRUCE BABBITT
GOVERNOR

DIVISION OF EMERGENCY SERVICES
RICHARD A. COLSON, DIRECTOR

MG DONALD L. OWENS
DIRECTOR

02.17
20.25
22.17

November 6, 1984

Mr. Douglas R. Norton
The Auditor General
111 West Monroe Street, Suite 600
Phoenix, AZ 85003



REFERENCE: Draft Sunset Audit of the Arizona Radiation
Regulatory Agency -- Finding III

The process of reviewing the findings of your office with regard to the Arizona Division of Emergency Services (ADES) and its relationship with the Arizona Radiation Regulatory Agency (ARRA) has been frustrating and, ultimately, disappointing. The second draft of your report contains the same inaccuracies and incorrect interpretations which ADES brought to your attention in two previous letters (October 12 and 24) and two meetings (October 15 and 24). Your staff has refused to modify its position regarding two major misconceptions, even in the face of evidence contrary to that upon which the report is based, and despite the conflicting opinion of your own counsel.

Finding III indicates that ADES has violated ARS 26-306.01 by failing to request sufficient funding for ARRA in the annual recommendation for assessment and appropriation to the Nuclear Emergency Management Fund (NEMF). To support this assertion, you rely upon a reconstruction of time spent by ARRA employees in support of the off-site emergency plan for the Palo Verde Nuclear Generating Station (PVNGS).

ADES has used an annual budget submission process to determine government costs related to the off-site emergency plan for PVNGS, and has included in that process an evaluation of the use of funds in the previous fiscal year. ADES has successfully recovered all government costs reasonably associated with the PVNGS off-site plan through use of this method over the last four years, based upon acceptance by the Legislature of our recommendations for annual assessments. Each year, we have asked for submissions from the participant agencies, which we have then reviewed to determine if each line item requested is reasonably related to a requirement of the PVNGS off-site emergency response plan. We have also pointed out instances in which a participant agency is likely to experience a "carry forward" of unspent NEMFs from one fiscal year to the next, and have requested that the unspent amount be applied to the next assessment/appropriation request.

Page -2-
November 6, 1984
Mr. Douglas R. Norton

In a discussion held on October 18, 1984, Mr. David Thomas, an attorney for the Arizona Legislative Council agreed with ADES that the method of compiling the annual assessment/appropriation request described above is acceptable and in compliance with ARS 26-306.01. This opinion is shared by staff of the Arizona House of Representatives who have been involved in the annual preparation of the assessment/appropriation bill since its inception. ADES did not violate statutory requirements, because we did request an amount equal to the reasonable requirements of ARRA related to PVNGS. The fact that ARRA began the current fiscal year with a \$56,000 "carry forward" is indication enough that, while there may have been management difficulties at ARRA, the funds obtained for ARRA by ADES were much more than adequate.

Interestingly, one of the few changes noted between the first and second drafts of your report is that your office is no longer relying on the Legislative Council Memorandum of May 25, 1984 to support your claim regarding the support ADES obtained for ARRA. We suspect that is because you have found that Legislative Council does not agree with your interpretation of the statute, but rather supports the ADES position.

Your finding continues to maintain that ADES allowed Arizona Public Service Company (APS) to improperly influence the level of the assessment proposal. We have repeatedly told your staff that this is not the case. Although APS has been appropriately involved in the process of negotiation which led to several of the assessment proposals, and while certain APS representatives have indicated a funding level above which higher consortium authority is consulted, at no time did ADES reduce the request of any participant agency, including ARRA, for a reason other than a finding that the specific equipment or personnel being requested could not be shown to be reasonably required because of the PVNGS off-site plan. At no time did ADES reduce the budget request of a participant agency because of a budget limit imposed by APS or anyone else.

It should be noted that a perfect opportunity existed in late 1983 for ARRA to correct the alleged improper limiting of the assessment level which is said to have occurred at two meetings in September of that year. If ARRA felt that ADES staff, or a former ADES director, had unreasonably limited or reduced ARRA's submission for FY'84-85, an appeal could have been made to the new ADES director who took office on October 1, 1983. No such appeal was made by ARRA, although an appeal was made by the other major participant agency, the Maricopa County Department of Civil Defense and Emergency Services. ARRA described itself as being "happy" with the proposal. No appeal was made at any of several Legislative hearings attended by ARRA and ADES at which the proposed budget was discussed, another opportunity to correct the alleged improper limiting of ARRA's budget proposal. It is our contention that no such limitation occurred, and ARRA's behavior in October, 1983 and at subsequent Legislative hearings proves that contention.

There are several other minor problems with the audit, which we will be happy to discuss with the members of the Joint Oversight Committee. I am confident

November 6, 1984
Page -3-
Mr. Douglas R. Norton

that our position will be sustained by the Senators and Representatives who have supported this program over the last four years with nearly unanimous votes approving the annual assessment/appropriation bills. State and local government agencies in Arizona, under the lead of ADES, have done an outstanding job of preparing, maintaining and exercising the PVNGS Off-Site Emergency Response Plan, as indicated by the laudatory comments of the U. S. Nuclear Regulatory Commission and the Federal Emergency Management Agency after the two evaluated exercises in May, 1983 and September, 1984. We look forward to extensive involvement in Legislative hearings on the unfortunate and incorrect findings of this audit.

Sincerely.


Richard A. Colson
Director

RAC:PFH:ar

INTRODUCTION AND BACKGROUND

The Office of the Auditor General has conducted a limited review of the Radiation Regulatory Hearing Board in response to an April 27, 1983, resolution of the Joint Legislative Oversight Committee. This limited review was conducted as part of the Sunset Review set forth in Arizona Revised Statutes §41-2351 through 41-2379.

The Radiation Regulatory Hearing Board was established in 1980 when the Arizona Atomic Energy Commission was abolished. The Board provides a vehicle for appeals by any Arizona Radiation Regulatory Agency (ARRA) licensee or registrant who desires reconsideration of a decision made by the director of ARRA. The Board, upon appeal by a person adversely affected, is required to review orders of the director or Agency relating to modification or revocation of a license, assessment of a civil penalty, or an order that is part of an escalated enforcement action. Since it was established the Board has not had the opportunity to review any orders of the director or the Agency because ARRA has not taken any enforcement actions that have resulted in an appeal.

The Board also may review rules and regulations promulgated by the Agency and make recommendations to the Agency and the Legislature regarding the rules and regulations. Since 1980 the Board has reviewed and commented on rules and regulations drafted and promulgated by ARRA. This is due to the fact that ARRA has been in the process of revising and updating its rules and regulations over the past 3 years.

The five-member board is appointed by the Governor and receives necessary staff assistance from ARRA. The Radiation Regulatory Hearing Board does not receive any direct funding, rather the Board's expenses are paid with general funds appropriated to ARRA.

Audit Scope and Purpose

Our audit of the Radiation Regulatory Hearing Board was limited to addressing the issues set forth in the 12 Sunset Factors in A.R.S. §41-2354.

The Auditor General and staff express appreciation to the members of the Radiation Regulatory Hearing Board for their cooperation and assistance during the course of our audit.

SUNSET FACTORS

In accordance with A.R.S. §41-2354, the Legislature should consider the following 12 factors in determining whether the Radiation Regulatory Hearing Board should be continued or terminated.

1. The objective and purpose in establishing the Board

According to A.R.S. §30-655.B the Arizona Radiation Regulatory Hearing Board was established in 1980 to provide a vehicle for appeal by any person adversely affected by an order of the Arizona Radiation Regulatory Agency (ARRA) or its director. The Board also serves to review and make recommendations on rules or regulations promulgated by ARRA, as specified in A.R.S. §30-655.D.

2. The effectiveness with which the Board has met its objective and purpose and the efficiency with which the Board has operated

The Board has not had the opportunity to hear any appeals because ARRA has not yet taken any formal enforcement actions that have resulted in an appeal. The Hearing Board has reviewed and commented extensively on ARRA's draft regulations; comments from this review have been incorporated in the final regulations as promulgated.

3. The extent to which the Board has operated within the public interest

The Board has not had the opportunity to hear any appeals, however, the Board's function appears to be in the public interest because it provides a check on the enforcement decisions of ARRA's director.

4. The extent to which rules and regulations promulgated by the Board are consistent with the legislative mandate

This factor is not applicable because the Board does not promulgate its own rules and regulations.

5. The extent to which the Board has encouraged input from the public before promulgating its rules and regulations and the extent to which it has informed the public as to its actions and their expected impact on the public

This factor is not applicable because the Board does not promulgate its own rules and regulations.

6. The extent to which the Board has been able to investigate and resolve complaints that are within its jurisdiction

This factor is not applicable because the Board does not receive complaints from consumers.

7. The extent to which the Attorney General or any other applicable agency of State government has the authority to prosecute actions under enabling legislation

This factor is not applicable because the Board has no enforcement authority of its own.

8. The extent to which the Board has addressed deficiencies in the enabling statutes which prevent it from fulfilling its statutory mandate

The Board has not proposed any changes to the enabling statutes.

9. The extent to which changes are necessary in the laws of the Board to adequately comply with the factors listed in the Sunset Law

No changes appear to be necessary in the Board's enabling legislation to adequately comply with the Sunset Factors.

10. The extent to which the termination of the Board would significantly harm the public health, safety or welfare

Termination of the Board would not significantly harm the public health, safety, or welfare. Nevertheless, the Board appears to provide a useful and less costly avenue for appeal as an alternative to the court system.

11. The extent to which the level of regulation exercised by the Board is appropriate and whether less or more stringent levels of regulation would be appropriate

This factor is not applicable because the Board has no regulatory functions of its own.

12. The extent to which the Board has used private contractors in the performance of its duties and how effective use of private contractors could be accomplished

The Board has not used private contractors in the performance of its duties.



Bruce Babbitt
Governor
Charles F. Tedford
Director



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RADIATION REGULATORY HEARING BOARD

Douglas R. Norton
Auditor General
111 West Monroe Street
Suite 600
Phoenix, AZ 85003



Dear Mr. Norton:

The following comments address the revised preliminary draft of the performance audit of the Arizona Radiation Regulatory Hearing Board. The comments are my own, and are not necessarily the views of the other Board members.

I would suggest the following addition (underlined) under Sunset Factor #2:

The Board has not had the opportunity to hear any appeals because ARRA has not yet taken any formal enforcement actions that have resulted in an appeal. *

The Radiation Regulatory Agency has in fact taken enforcement actions. This correction was appropriately made in the revised Introduction and Background paragraph.

Under Sunset Factor #3, the language might be broadened to indicate that the Board provides a check on unfair, arbitrary or capricious enforcement decisions of ARRA's director.

I concur with the general conclusions of the performance audit.

Sincerely,

James M. Woolfenden, M.D.
Chairman

* This addition was made in the final draft.

ARIZONA LEGISLATIVE COUNCIL

MEMO

May 25, 1984

TO: Douglas R. Norton
Auditor General

FROM: Arizona Legislative Council

RE: Request for Research and Statutory Interpretation (0-84-3)

This is in response to a formal request submitted on your behalf by William Thomson in a memo dated May 4, 1984.

FACT SITUATION:

Arizona Revised Statutes (A.R.S.) section 26-306.01 requires the legislature to levy an annual assessment against each consortium of public service corporations and municipal corporations engaged in constructing or operating a commercial nuclear generating station.

Subsection A of A.R.S. section 26-306.01 states that:

"the legislature shall levy an annual assessment . . . to provide for the development and maintenance of a state plan for off-site response to an emergency caused by an accident at a commercial nuclear generating station and to provide for the equipment, personnel, facilities, training and testing necessary to comply with criteria for preparation and evaluation of radiological emergency response plans and preparedness in support of commercial nuclear generating stations prescribed by the United States nuclear regulatory commission and the federal emergency management agency."

Subsection B of A.R.S. section 26-306.01 requires the director of the division of emergency services (ADES) to "recommend to the legislature the amount necessary to develop, maintain and support the state plan."

A.R.S. section 26-306.02 states that ADES "shall use the fund for administering and enforcing the state plan for off-site response to an emergency caused by an accident at a commercial nuclear generating station." Monies in the nuclear emergency management fund are "appropriated for use by the division as provided in this section."

Currently, the only consortium in Arizona is involved in building the Palo Verde nuclear generating station which is scheduled to go on-line in 1985. ADES negotiates with Arizona Public Service, the representative for the consortium, in order to determine the amount of the nuclear emergency management fund (NEMF) appropriation request submitted to the legislature each year. The Arizona radiation regulatory agency and Maricopa county receive monies from the NEMF;

their budget requests are submitted to ADES for inclusion in the NEMF appropriations request. However, it appears that all costs associated with developing and maintaining the emergency response plan have not been requested by ADES and recovered by either the Arizona radiation regulatory agency or Maricopa county.

QUESTIONS PRESENTED:

1. Do the provisions of A.R.S. section 26-306.01 require the director of ADES to recommend an amount necessary to cover all of its costs and all costs of other agencies and governmental entities associated with developing, maintaining, and supporting the state's emergency response plan?

2. Does the ADES practice of negotiating the amount of the appropriation request with Arizona Public Service comply with the provisions of A.R.S. sections 26-306.01 and 26-306.02?

ANSWERS:

1. Yes.
2. No, see discussion.

DISCUSSION:

1. The only responsibility stated for ADES in A.R.S. section 26-306.01 is to make an annual recommendation to the legislature of "an amount necessary to develop, maintain and support the state nuclear emergency response plan." All other responsibilities under that section are the legislature's. The legislature is to determine and appropriate the necessary amount of money. The legislature is only required to "hear" ADES' recommendation and may legally accept, reject, ignore or modify the recommendation. The legislature has plenary power over determining the amount of appropriations. ADES is a mere advisor. The fact that the legislature may in a particular year appropriate the same amount that ADES recommends is only coincidental and not legally significant.

Nevertheless, there is a legal presumption that ADES' responsibility under this statute is not frivolous, but that it was given a substantive role in determining the amount of the annual nuclear emergency response appropriation and assessment. ADES is designated as the "lead agency and has the overall and primary responsibility for development" of the state nuclear emergency response plan. A.R.S. section 26-305.01, subsection A. Further, that section provides for ADES to work in consultation with other specific state agencies:

1. Radiation regulatory agency.
2. Commission of agriculture and horticulture.
3. State dairy commissioner.

4. Department of health services.
5. Department of public safety.
6. Department of transportation.
7. Division of military affairs within the department of emergency and military affairs.
8. Office of economic planning and development (to be the department of commerce).
9. Arizona corporation commission.
10. Any other agencies or offices deemed necessary by the division of emergency services.

ADES is to test and maintain the plan which includes response by other state agencies and agencies of political subdivisions. A.R.S. section 26-306, subsection B, paragraph 1. Since the plan includes response by other state and local agencies, and these agencies are designated participants in developing, testing and maintaining the plan, it is the conclusion of this office that the legislature intends and expects that the director of ADES will include the costs attributable to other state and local agencies, together with ADES' own costs, in the annual overall amount recommended by the director as necessary to develop, maintain and support the nuclear emergency response plan. There is no language in A.R.S. section 26-306.01 to suggest a recommendation limited only to ADES' portion of the costs of the plan.

2. The amount appropriated and assessed against the consortium each year is to be the "amount necessary to develop, maintain and support the state plan." A.R.S. section 26-306.01, subsections B and C; cf. subsection A. There is no allowance for considering the expense to or financial condition or any other interest of the power plant consortium in either recommending or setting the amount of the appropriation and assessment. These commercial considerations are irrelevant to the purpose of the appropriation and assessment. The government does not dicker with the taxpayer over the amount of taxes it levies. A taxpayer cannot hamper the taxing power of sovereignty by inserting itself in the taxing process, except as allowed by law, and the government may not bargain its taxing power. Constitution of Arizona Art. IX, sec. 1. Thus, insofar as the ADES recommendation of an amount of appropriation and assessment reflects an amount bargained and agreed to by and for the expediency of the consortium rather than the amount of the governmental costs of developing, maintaining and supporting the state plan, as described in question 1 above, the ADES negotiations violate legislative expectations, the statutes and the state constitution.

You should note, however, that there is no objection to the consortium's representative presenting recommendations to ADES regarding the assessment and appropriation. But this procedure is distinct from "negotiating" with ADES, as described in the facts, which implies bargaining away and compromising sovereign

governmental powers and interests. Moreover, there is no objection to ADES negotiating with representatives of the consortium over collateral issues which may reflect on the amount of the annual appropriation and assessment recommendation. There are obviously valid reasons for communication, discussion, bargaining and settlements between ADES and the consortium. These discussions could include and affect elements of administration, implementation and application of the plan which, in turn, may influence the plan's cost. The objection and invalidity arises only if a negotiated amount becomes the actual basis for ADES' recommendation to the legislature.

cc: William Thomson, Manager
Performance Audit Division