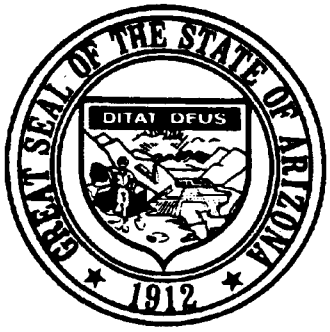

PERFORMANCE AUDIT

MEDICAL RADIOLOGIC TECHNOLOGY BOARD OF EXAMINERS

Report to the Arizona Legislature
By the Auditor General
May 1996
Report #96-4

STATE OF ARIZONA
OFFICE OF THE
AUDITOR GENERAL

DOUGLAS R. NORTON, CPA
AUDITOR GENERAL

DEBRA K. DAVENPORT, CPA
DEPUTY AUDITOR GENERAL

May 20, 1996

Members of the Arizona Legislature

The Honorable Fife Symington, Governor

Mr. Aubrey V. Godwin, Chairman
Medical Radiologic Technology Board of Examiners

Transmitted herewith is a report of the Auditor General, A Performance Audit of the Medical Radiologic Technology Board of Examiners (MRTBE). This report is in response to a May 29, 1995, resolution of the Joint Legislative Audit Committee. The performance audit was conducted as part of the sunset review set forth in A.R.S. §§41-2951 through 41-2957.

We found that the Arizona Radiation Regulatory Agency (ARRA), and not the MRTBE, can best protect the public from unqualified radiation technicians. MRTBE has no inspectors to detect unqualified practitioners and can take little or no enforcement action when such practitioners are discovered. ARRA, on the other hand, can protect the public from unqualified practitioners as part of its regulation of the facilities that employ technicians. ARRA is required to inspect these facilities on a regular basis and can issue penalties against facilities that employ unqualified practitioners and, if necessary, can suspend or revoke a facility's license or impound a facility's x-ray machine. However, ARRA is currently working to address a backlog in its inspections. Therefore, we recommend continuing MRTBE for three years to allow ARRA to address this backlog. Once the backlog is addressed, MRTBE can be sunset and ARRA assigned the responsibility of regulating radiation technicians.

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

This report will be released to the public on May 21, 1996.

Sincerely,

Douglas R. Norton
Auditor General

Enclosure

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SUMMARY

The Office of the Auditor General has conducted a performance audit and sunset review of the Medical Radiologic Technology Board of Examiners (MRTBE), pursuant to a May 29, 1995, resolution of the Joint Legislative Audit Committee. This audit was conducted as part of the sunset review as set forth in Arizona Revised Statutes (A.R.S.) §§41-2951 through 41-2957.

The MRTBE was established in 1977 as a division of the Arizona Radiation Regulatory Agency (ARRA) in light of evidence suggesting that knowledgeable radiation technicians can reduce unnecessary patient exposure to radiation. MRTBE is statutorily empowered to determine minimum competency standards for users of sources of radiation. MRTBE issues licenses to those who: 1) meet minimum standards of training and experience established by the Board or by statute; 2) pass an examination administered by the Board or an acceptable certificate-granting body; 3) submit an application and pay a fee; and 4) meet other statutory requirements such as demonstration of good moral character. The Board consists of ten board members and employs two full-time staff.

Regulation of Radiation Technicians Can Be Accomplished Without MRTBE and Its Licensing Activities (See pages 7 through 11)

Public protection from unqualified practitioners operating x-ray machines can be achieved without the need for the Medical Radiologic Technology Board of Examiners (MRTBE). The Arizona Radiation Regulatory Agency (ARRA) and entities such as the Arizona Department of Health Services also confirm that practitioners possess adequate qualifications as part of their inspections of facilities that employ radiation technicians.

Currently, the Board adds little to public health protection through its enforcement efforts. Because MRTBE employs no full-time inspectors and its enforcement powers are limited, it can do little to detect or sanction unqualified practitioners. The enforcement actions it does take are primarily limited to sanctioning those who are late in submitting their renewal fee, and sending letters to facilities (whom they have no enforcement authority over) whose employees practice outside the scope of their license.[1] In contrast, ARRA is able to detect and sanction unqualified practice through its inspection and regulation of the facilities.

[1] MRTBE learns about such unqualified practice through complaints it receives.

The Legislature should consider eliminating MRTBE and rely instead on ARRA to confirm radiation technnologists' qualifications. Eighteen other states, such as South Carolina, Michigan, Kansas, and Missouri, either do not regulate technologists, or rely on agencies that regulate facilities to confirm technologists' qualification. However, before terminating MRTBE, the Legislature needs to ensure that ARRA's inspections backlog and other performance deficiencies noted in our October 1995 report (Report No. 95-8) are addressed.

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INTRODUCTION AND BACKGROUND

The Office of the Auditor General has conducted a performance audit and sunset review of the Medical Radiologic Technology Board of Examiners (MRTBE), pursuant to a May 29, 1995, resolution of the Joint Legislative Audit Committee. The audit was conducted under the authority vested in the Auditor General by Arizona Revised Statutes (A.R.S.) §§41-2951 through 41-2957.

Board's Purpose

The Medical Radiologic Technology Board of Examiners (MRTBE) was established in 1977 as a division of the Arizona Radiation Regulatory Agency (ARRA) in order to protect the public from the harmful effects of excessive and improper radiation exposure. According to the National Research Council, ionizing radiation's "well demonstrated [long term] effects include the induction of cancer, genetically determined ill-health, developmental abnormalities, and some degenerative diseases such as cataracts."[1]

The Legislature formed MRTBE in light of evidence suggesting that knowledgeable technicians can reduce unnecessary patient exposure to radiation. Laws 1977, Ch. 145 §1 declare that:

> *"[radiation] protection can in some major measure be accomplished by requiring adequate training and experience of persons operating x-ray equipment in each particular case under the direction of licensed practitioners. . ."*

Accordingly, the Legislature created MRTBE to *"establish standards of education, training and experience and to require the examination and certification of operators of x-ray equipment."*

A ten-member Board appointed by the Governor is charged with carrying out MRTBE's mission. State law requires that the Board include four practicing radiologic technologists, two public members, two licensed practitioners (including one radiologist), and one practical technologist. The Director of the Arizona Radiation Regulatory Agency (ARRA) serves as the board chairman and tenth board member.

[1] *Health Effects of Exposure to Ionizing Radiation*, National Research Council, National Academy Press, Washington, D.C., 1990.

Board Responsibilities

MRTBE is statutorily empowered to determine minimum competency standards for technicians and others who work with sources of radiation. A.R.S. §32-2811 states that "no person may use ionizing radiation on a human being unless the person is a licensed practitioner or the holder of a certificate."[1] Statutes mandate that MRTBE issue such certificates to applicants who: 1) meet minimum standards of training and experience established by the Board or by statute; 2) pass an exam administered by the Board or an acceptable certificate-granting body; 3) submit an application and pay a fee; and 4) meet other statutory requirements, such as demonstration of good moral character.

The Board is also responsible for disciplining certificate holders who violate statutory standards of conduct. In addition, A.R.S. §32-2824 authorizes MRTBE to conduct inspections for purposes such as 1) assuring only certified individuals or those exempt from certification requirements operate ionizing radiation machines; and 2) determining whether certified individuals are practicing beyond the scope of their certificate.

MRTBE issues eight certificate types to people who work with sources of radiation. The eight types of certificates issued include:

- **Radiologic Technologist**—These certificate holders can perform x-rays on any part of the body. Certificates are issued to people who complete two years of specialized training at an accredited school and pass a test given by the American Registry of Radiologic Technicians (ARRT).

- **Radiation Therapist**—Those who hold this certificate can apply machine radiation for therapeutic purposes. Radiation therapists must complete two years of specialized training at an accredited school and pass a test given by ARRT.

- **Practical Technologist** —Those who hold this certificate can only perform x-rays of the chest and extremities. MRTBE issues this certificate to those who receive 6 to 9 months of training with a minimum of 210 classroom hours and 12 weeks of clinical training. These certificate holders must also pass an ARRT or state-administered exam.

- **Practical Technologist Unlimited**—Those who hold this certificate can perform x-rays on any part of the body. MRTBE issues this certificate to technologists who were performing x-rays when the MRTBE was created in 1977.

- **Podiatry**—MRTBE issues this certificate to applicants who complete 32 hours of specialized training, pass an MRTBE exam, and successfully conduct x-ray exams

[1] The law states that licensed practitioners such as doctors, dentists, osteopaths, podiatrists, chiropractors, and others do not have to hold certificates. Dental hygienists and dental assistants holding a valid certificate in dental radiology are also not required to hold a certificate.

under the supervision of a podiatrist. The MRTBE and the State Board of Podiatry Examiners both review x-rays the applicant takes during a clinical trial before issuing a certificate.

- **Mammography**—This certificate allows radiation technologists to perform mammograms. The Board issues this certificate to certified radiographic technologists who also pass either a specialized exam in mammography offered by the ARRT or undergo extra training in mammography and an MRTBE exam.

- **Temporary**—MRTBE issues various temporary certificates to applicants whose permanent certification or recertification may be pending. Such certificates are valid for limited amounts of time, depending on factors such as the certificate type and date of the next applicable exam.

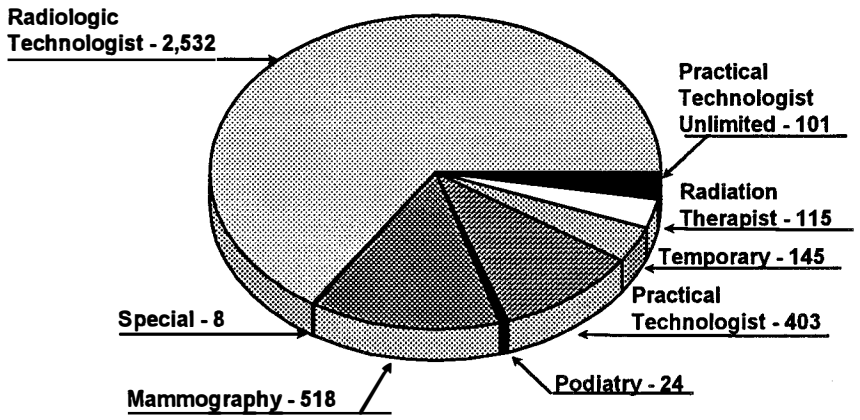
- **Special**—MRTBE issues special certificates exempting individuals from licensing requirements when there is an absence of certified practitioners in a locality.

Each of the certificates (with the exception of special and temporary certificates) is valid for two years, at which time it must be renewed. MRTBE does not currently require that those renewing a certificate take an examination, demonstrate that they have practiced radiography, or have current ARRT certification. However, technologists renewing a mammography certificate must complete eight hours of continuing education during the past two years for certification renewal.

MRTBE reported 3,846 certificate holders as of August 17, 1995, as shown in Figure 1, page 4.

Figure 1

MRTBE Active Certificates by Type
(as of August 1995)



Total Certificates Issued: 3,846

Source: Report from MRTBE database and files of certificate holders.

Staffing and Budget

MRTBE is a division of the Arizona Radiation Regulatory Agency (ARRA). The Board employs two full-time equivalent employees (FTEs), a program manager, and an administrative secretary, who oversee MRTBE operations. Their job duties include responding to inquiries from those who are interested in or already hold a certificate; collecting fees; issuing and renewing licenses; and investigating complaints and preparing recommendations for disciplinary actions to the Board.

MRTBE is self-supporting. The Legislature approved $105,800 for MRTBE operations in fiscal year 1995-96. Such funds are appropriated from the state radiologic technologist certification fund, which derives its revenue from amounts MRTBE charges for applications, examinations, license renewals, and fines. The Fund's balance at the end of fiscal year 1994-95 was $186,577.

Audit Scope and Methodology

This audit focuses on the need for the Medical Radiologic Technology Board of Examiners, its ability to detect and deter uncertified practice, and the effectiveness of disciplinary actions taken by the Board.

Our fieldwork included a review of other states' regulation of radiographic technicians and studies about the need for such regulation. We also contacted parties affected by or involved in regulation and training of technicians, such as hospital administrators; certificate holders; professional associations, such as the American Registry of Radiographic Technologists (ARRT) and the Arizona Chapter of the American Society of Radiologic Technologists (ASRT); state and federal agencies, such as the Arizona Department of Health Services, and the U.S. Department of Health and Human Services; and schools that train radiation technicians. We also reviewed disciplinary actions taken by MRTBE from January 1, 1992, to August 10, 1995. Furthermore, we examined the adequacy of MRTBE's rules, the efficiency of its fee collection process, and its ability to resolve complaints.

The audit was conducted in accordance with generally accepted government auditing standards.

The Auditor General and staff express appreciation to the Medical Radiologic Technology Board of Examiners, the Board Chairman, and MRTBE staff for their cooperation and assistance throughout the audit.

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FINDING I

REGULATION OF RADIATION TECHNICIANS CAN BE ACCOMPLISHED WITHOUT MRTBE AND ITS LICENSING ACTIVITIES

Public protection from unqualified practitioners operating x-ray machines can be achieved without the Medical Radiologic Technology Board of Examiners (MRTBE). The Arizona Radiation Regulatory Agency (ARRA) and others already confirm radiation technician qualifications during inspections of facilities that employ technicians. Moreover, ARRA can better ensure that only qualified practitioners operate x-ray equipment since it employs full-time inspectors and can sanction facilities that allow unqualified technicians to practice. After ARRA addresses its inspections backlog, the Legislature should consider eliminating MRTBE and licensing of radiation technicians, relying instead on ARRA to protect the public through its regulation of facilities that employ x-ray technicians.[1]

Other Entities Also Confirm Technicians' Qualifications

MRTBE's licensure of radiation technicians is not needed to confirm technician qualifications. The Arizona Radiation Regulatory Agency (ARRA) checks radiologic technician qualifications as part of its x-ray machine inspection process. In addition, other government agencies and health care insurers also confirm technician qualifications, thus further ensuring that technicians possess state-required qualifications.

ARRA confirms qualifications — ARRA already confirms radiation technician qualifications as part of its regulation and inspection of facilities that operate x-ray equipment. State law requires ARRA to adopt rules requiring adequate training and experience for radiation technicians. Currently, ARRA rules require that a facility's technicians be MRTBE-certified in order to be deemed adequately qualified. However, ARRA could adopt a rule requiring that other evidence, such as certification by the American Registry of Radiographic Technologists, serve as proof that technicians possess adequate qualifications. Certification by the Registry is already accepted as proof of qualification by MRTBE.

[1] MRTBE rules and statutes refer to the regulation of radiation technicians as certification. MRTBE also issues "certificates" to radiation technicians. However, the regulation of radiation technicians is more accurately referred to as licensure since regulation makes it illegal for anyone other than a certificate holder to practice radiation technology.

Others confirm qualifications—Other government agencies, credentialing organizations, and health care insurers also confirm technician qualifications. Such agencies include:

- **Arizona Department of Health Services (ADHS)**—ADHS confirms technician qualifications as part of its licensure and inspection of health care and Medicare facilities. ADHS inspectors confirm that facilities comply with state qualification requirements for radiation technicians. ADHS also ensures that the facilities are in compliance with ARRA.

- **Health Insurers and JCAHO**—Health insurers such as Blue Cross Blue Shield monitor whether hospitals comply with state qualification requirements for radiation technicians. In addition, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), which accredits 80 percent of the nation's hospitals, ensures that hospitals comply with state qualification requirements.

ARRA Can More Effectively Enforce Against Unqualified Practice

In addition to MRTBE's unnecessary role in confirming practitioner qualifications, it adds little to public health protection through its enforcement efforts since its authority and resources are limited. In contrast, ARRA possesses greater ability to identify, sanction, and deter unqualified practice through its regulation of the facilities that employ such technicians.

MRTBE's powers limited—MRTBE can do little to protect the public from unsafe radiation exposure. Currently, MRTBE has difficulty identifying unlicensed, unqualified practitioners because MRTBE employs no inspectors. In addition, the program manager states that he has little time to conduct inspections himself.

Even when MRTBE does identify unqualified practitioners, it can do little to sanction or stop such practice. MRTBE has no authority to sanction facilities that employ radiation technicians, though such facilities may encourage unqualified employees to handle radiation. MRTBE can also do little to sanction individual radiation technicians. Although MRTBE can statutorily pursue criminal penalties against unlicensed technicians, the program manager says that county attorneys often choose not to prosecute such cases. As a result, MRTBE often does not attempt to seek penalties.

Since MRTBE can do little to sanction unqualified practice, the enforcement actions it does take are less directly linked to protecting the public's health. For example, of the 37 disciplinary actions MRTBE took between January 1, 1992, and August 10, 1995 (over 3½ years), *none* involved a licensee exposing a patient to unnecessary radiation. Instead:

- 14 actions involved licensees who allowed their license to expire and were late in submitting their license renewal fee.

- 9 actions involved a technician performing beyond the scope of his or her license. In all but one of the cases, the Board merely sent a letter notifying the facility that such actions are illegal.

- 7 actions involved MRTBE taking an action against licensees who engaged in unprofessional conduct (such as drug abuse or a criminal offense) after the facility or law enforcement had *already* sanctioned the individual.

- 6 actions involved someone practicing without a license. For three of the six cases, MRTBE merely sent a letter to the facility that employed them.

- 1 action was limited to MRTBE placing a letter in the file of a licensee who inappropriately misstated her credentials.

***ARRA more effective*—**Compared to MRTBE, ARRA can better protect the public from unqualified practitioners through its regulation of the facilities that employ practitioners. ARRA possesses statutory authority to sanction facilities that use unqualified employees to operate x-ray machines. In one case, ARRA issued a $2,000 penalty against a facility that employed unlicensed technologists. ARRA may also suspend or revoke a facility's registration or impound a facility's x-ray machines if it fails to comply with ARRA rules pertaining to technician qualifications. Furthermore, ARRA can more effectively detect unqualified practitioners initially, since it employs full-time inspectors who can conduct surprise inspections if necessary. In fact, MRTBE relies on ARRA inspectors to conduct investigations when it receives complaints concerning unlicensed practice.

Once ARRA Addresses Its Inspections Backlog, the Legislature Should Consider Relying on ARRA to Regulate Radiation Technicians

Evidence suggests that the State could rely on a well-functioning ARRA to ensure that radiation technicians are adequately qualified. The Legislature could eliminate MRTBE and licensure of all radiation technicians, relying instead on ARRA to confirm radiation technician qualifications through its inspection and regulation of facilities that operate x-ray equipment. However, before the Legislature terminates MRTBE, it should ensure that ARRA addresses its inspections backlog and corrects other performance deficiencies noted in a previous Auditor General report (Report No. 95-8).

***ARRA could effectively regulate*—** Evidence suggests that relying on ARRA to regulate radiation technicians could be effective. Other states either do not regulate their technicians, or use the x-ray programs to verify technician qualifications. Of the 18 states that do not certify or license radiation technicians, 11 states, including South Carolina, Kansas, Michigan, and Missouri, rely on agencies that regulate facilities to confirm technician qualifications.[1, 2]

Other evidence also suggests that relying on ARRA to confirm technicians' qualifications can work in Arizona. Currently, one category of radiation technicians is not licensed by the MRTBE. Nonetheless, even though nuclear technicians (the professionals who administer nuclear medicines for therapeutic purposes) are not licensed, ARRA is able to confirm technician qualifications as part of its inspections of facilities that handle radioactive materials. Hence, nuclear technician qualifications are confirmed without the need for MRTBE licensure.

***MRTBE should be eliminated*—** Since ARRA already confirms technician qualifications as part of its inspection of registered x-ray facilities, the Legislature should consider eliminating MRTBE and all licensure of radiation technicians. Instead, the State could rely on ARRA to ensure that radiation technicians are qualified.

To ensure that technicians possess adequate qualifications, ARRA could require that facilities keep on file documentation of employees' qualifications. One such type of documentation that many states require is certification from the American Registry of Radiographic Technologists. The Registry certifies radiologic technologists, radiation therapists, and mammography technologists. Those who possess a certificate from the Registry have 1) graduated from an accredited school; 2) passed a competency test; and 3) not been cited by the Registry for unprofessional conduct. The Registry renews certificates for those who possess continuing education credits. MRTBE itself currently recognizes the Registry certification as proof that license applicants possess adequate qualifications during its initial licensure of applicants. Indeed, MRTBE used the Registry certification as proof that license applicants were adequately qualified for 80 percent of all MRTBE license applicants in fiscal year 1995.

[1] Seven states, including Alabama, South Dakota, North Carolina, Alaska, Minnesota, Arkansas, and Oklahoma, currently do not regulate radiation technicians. However, beginning January 1, 1997, Minnesota will require radiation technicians to pass a national or regional certification exam. Inspectors for the State's x-ray compliance program will confirm qualifications.

[2] Not all states regulate every type of technician that Arizona currently regulates. In addition, some of the radiation control program directors in other states reported difficulty confirming qualifications since regulations requiring facilities to document qualifications were too vague. Conversely, in states where regulations were more specific such as South Carolina, Michigan, and Missouri, the radiation control program directors reported that they do confirm qualifications as part of inspections.

ARRA could also adopt rules requiring that facility files contain additional types of proof of technician qualifications required by other states, such as:

- Documentation of job-related experience and/or training;
- Proof that the technologist passed a national certification exam, such as the one that has been developed for practical technologists by the Registry;
- Documentation of a review from another Board, such as the State Board of Podiatry Examiners.

The Legislature could specifically revise ARRA's statutes to ensure that radiation technologists would still be required to possess the same qualifications, education, and experience currently required by MRTBE rules and state law.

***ARRA needs to improve first*—** Before the Legislature terminates MRTBE and relies solely on ARRA to confirm qualifications, ARRA needs to address its current inspections backlog and other performance deficiencies. In the October 1995 report on ARRA (Report No. 95-8) by the Auditor General, we found that ARRA was having considerable difficulty keeping up with its timetable for inspections and needed to improve its productivity.

ARRA's Director believes that eliminating MRTBE at this time would place an additional time burden on the Agency. He believes the current workload of MRTBE, which requires two FTEs to accomplish, would have to be absorbed by ARRA at a time when ARRA is struggling with its own workload. However, much of the MRTBE workload involves licensing and testing which would no longer be necessary if ARRA were to rely on the Registry to certify technicians. Checking to see if technicians have such a certification would not appreciably extend an ARRA facility inspection. ARRA does, however, still have a backlog of inspections. Therefore, the Legislature should consider giving ARRA reasonable time to improve before terminating MRTBE.

RECOMMENDATION

The Legislature should consider continuing MRTBE for three years. Before MRTBE's extension expires, the Legislature should assess ARRA's progress in addressing its performance deficiencies and inspections backlog. If improvements have occurred, the Legislature should consider terminating MRTBE, relying instead on ARRA to confirm radiation technician qualifications.

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SUNSET FACTORS

In accordance with A.R.S. §41-2954, the Legislature should consider the following 12 factors in determining whether the Medical Radiologic Board of Examiners should be continued or terminated.

1. Objective and purpose in establishing the Board.

The Legislature created MRTBE in 1977 to protect the public's health and safety against the harmful effects of excessive radiation. Laws 1977, Ch. 145 §1 state that protection *"can in some major measure be accomplished by requiring adequate training and experience of persons operating x-ray equipment."* Thus, the Board was created to *"establish standards of education, training and experience and to require the examination and certification of operators of x-ray equipment."*

The Board is statutorily empowered to determine minimum competency standards for people who work with radiation. The Board is charged with issuing certificates to and collecting fees from those who meet these minimum standards. The Board is also responsible for disciplining or revoking the certificates of those who violate statutory standards of conduct. The Board is authorized to conduct inspections to assure that only certified individuals or those exempt from certification requirements operate ionizing radiation machines, and to assure that certified individuals are not practicing beyond the scope of their certificate.

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

According to the Board Chairman, the Board meets its mandate to issue certificates to qualified individuals. However, we question the need for the Board since other agencies also ensure competence. In addition, the Board is not effective in identifying unlicensed practice (see Finding I, pages 7 through 11).

The Board could improve the efficiency of its renewal process. Currently, mammography certificates have different due dates than radiographic technologist certificates. This causes unnecessary confusion and inefficiency since all mammography certificate holders also must hold radiologic technologist certificates.

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

The Board's authority to issue licenses to people who work with radiation serves the public interest by ensuring that those who hold such licenses meet minimum competency standards. Such competency requirements may protect the public from unnecessary exposure to radiation, and from misdiagnosis due to inaccurate results from diagnostic tests, such as x-ray exams. However, competency requirements could be confirmed without the need for licensure through the Arizona Radiation Regulatory Agency and its regulation of facilities that operate x-ray machines (see Finding I, pages 7 through 11).

The Board has difficulty identifying uncertified practitioners. Further, according to the program manager, it often does not refer those uncertified practitioners that it does identify to county attorneys for prosecution since they are reluctant to prosecute such cases (see Finding I, pages 7 through 11). Therefore, the Board does not protect the public from the possible harmful effects of unqualified people handling sources of radiation.

4. **The extent to which rules adopted by the Board are consistent with the legislative mandate.**

While a statute requires the Board to adopt rules setting minimum standards of training and experience for persons to be certified, MRTBE has not done this for all such users. In particular;

- MRTBE has not promulgated rules to regulate nuclear technicians who administer radioactive sources to patients for therapeutic or diagnostic purposes, such as cancer treatment. Interviews with representatives from the Arizona Society of Nuclear Medicine and the Attorney General's Office suggest that while MRTBE has known about the need for such regulation since a 1988 change in statute, it has not taken actions to adopt such rules. Nonetheless, nuclear technicians' qualifications are currently being confirmed by ARRA as part of its inspection and regulation of facilities that handle radioactive materials.

- The Board has not promulgated rules listing the permitted applications of ionizing radiation by practical technologists in podiatry, even though statute requires such a rule.

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

MRTBE has not adopted rules in ten years, so there is no evidence as to whether the Board encourages input from the public.

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

From July 1, 1992, to June 30, 1995, MRTBE reported that it received 55 complaints concerning unlicensed practice, licensees working outside of the scope of their license, and unprofessional conduct.

MRTBE is limited in its ability to investigate complaints of uncertified practice or complaints of licensees working outside the scope of their license. According to the program manager, the absence of staff devoted solely to investigations, and the statutory requirement that MRTBE must give 24 hours' notice to a facility before conducting an investigation, hinders MRTBE investigation efforts. As a result, MRTBE usually relies on the Arizona Radiation Regulatory Agency (ARRA) to conduct investigations. In addition, the program manager says that MRTBE is not able to take strong enforcement action against uncertified practitioners due to county attorneys' unwillingness to prosecute them (see Finding I, pages 7 through 11).

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

The Attorney General or county attorney has authority to prosecute actions under MRTBE's enabling legislation.

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

According to the Board Chairman, a former Attorney General representative noted that statutory changes may be necessary for MRTBE to regulate nuclear technicians. Such regulation appears to be necessary since statute mandates that users of radiation be licensed practitioners or holders of a certificate. Nonetheless, the public's health does not appear to be in jeopardy, since the Arizona Radiation Regulatory Agency (ARRA) currently confirms nuclear technician qualifications as part of its inspection and regulation of facilities that use radioactive materials.

In addition, MRTBE's program manager states that a statutory change is needed to stagger certificate renewals. By changing the statute and staggering renewal dates, the Agency could more efficiently collect the fees that it is required to collect.

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

If MRTBE is not eventually terminated, its sunset review date should be changed to coincide with the sunset review date of its parent organization, the Arizona Radiation Regulatory Agency. Currently, the two entities have separate sunset dates even though MRTBE is located within ARRA.

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

While ensuring the competency of radiation technologists is important to protecting the public from unnecessary radiation exposure and its subsequent harmful health effects, the Arizona Radiation Regulatory Agency is already statutorily empowered to perform this task. In addition, others such as the FDA, the Joint Commission on Accreditation of Health Care Organizations (JCAHO), and the Arizona Department of Health Services confirm that technologists are adequately qualified. Thus, MRTBE could be terminated without any significant harm to the public health, safety, or welfare.

MRTBE adds little to the protection of the public's health. In the vast majority of cases, MRTBE merely confirms certification or test scores from a national association as proof that licensee applicants are adequately qualified. The Board does little to identify unlicensed practitioners, and it does not bring unlicensed practitioners that it does identify to county attorneys for prosecution since they are reportedly not eager to prosecute such cases. The enforcement actions MRTBE does take are either not needed or are unrelated to protecting the public from unnecessary radiation exposure.

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.

The level of regulation exercised by the Board could be reduced. Licensure of radiation technicians is not necessary to protect the public health. Statute authorizes ARRA to adopt standards and confirm qualifications for radiation technicians as part of its regulation of facilities that use radiation sources (see Finding I, pages 7 through 11).

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.

MRTBE has made limited use of private contractors. MRTBE contracts with the American Registry of Radiologic Technologists (ARRT) to furnish exams to people applying for practical technologist certificates. In addition, MRTBE hires a court reporter to record hearings and prepare transcripts.

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Agency Response

ARIZONA
RADIATION REGULATORY AGENCY

Fife Symington
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Aubrey V. Godwin
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May 14, 1996

Douglas R. Norton
Auditor General
2910 North 44th Street, Suite 410
Phoenix, AZ 85018

Dear Mr. Norton;

Thank you for this opportunity to comment on the draft report on the Medical Radiologic Technology Board of Examiners. First I would like to thank you and your staff for their efforts in evaluating this difficult subject for the protection of the public health and safety. While we do not agree with the finding, we appreciate your efforts. Our comments are attached and we believe they support a different conclusion than the one provided in the draft.

Again thank you for the review.

Sincerely

Aubrey V. Godwin
Director

Attachment

DRAFT SUNSET REPORT COMMENTS

PAGE, LOCAL.	COMMENT
I, Para. 2	The following statement should be added; "**Data available from 1979, indicate that before the passage of the MRTBE Statute and while being regulated by ARRA, at least 67% of the x-ray equipment operators, outside of hospitals and radiology clinics, had no formal training, and patients were needlessly overexposed. This initially occurred while training was regulated by ARRA and before the establishment of MRTBE. Currently 10% have little or no formal training, but all have received sufficient on the job instruction to reduce or prevent overexposures to patients.**"
ii, Para.1	The listed states A. Do not have the same statutory authority as provided for ARRA, particularly as limited by §30-654 B.9. and, B. Are not checking the qualifications of x-ray equipment operators equal to that of MRTBE as implied by this paragraph. In fact, according to the programs listed, they are coming close to this only for mammography. Even for mammography, several important items are not being determined. 1. The criminal record of the technologist is not requested nor reviewed even for sex crimes, 2. drug users are not detected, and 3. malpractice in the taking of the x-rays is not addressed by any of these listed programs. South Carolina comes closest, in that they request each facility to have a training program which must cover certain subjects. This is in the form of a guide and may not be enforceable. See also page 10, the first full sentence on that page.
iii,	The term "technicians" appears several times on this page and elsewhere in the report and is not proper for the members of this profession. The proper term is "technologist." This is a specialist in a technology as opposed to a technician who is an expert in the technical details of a subject.
7, Finding	This whole finding omits several important points: A. The MRTBE performs the determination of the qualifications of the technologists. All of the other Agencies are saying "obey the State Law (MRTBE)," which requires the certification for radiologic technologists. These Agencies are **not** determining the qualifications of the technologists but are merely confirming compliance with that Law. Contrary to the statements on page 8, JCAHO only confirms that the employees comply with state law. Without a law requiring the certification (or licensing) of the technologists, JCAHO will accept anyone as adequate so long as they comply with state law. The Auditor

General's report does not address the private offices which are not reviewed by the JCAHO and are not reviewed by the insurance carriers. Data from 1979 indicates that at least 67% of these offices had inadequately trained personnel operating x-ray equipment when MRTBE was created. In short, the headings are at best misleading since they are based on a false premise, i.e., that the cited Agencies actually determine the qualifications of the operators, when, in fact, all they are doing is determining compliance with State Law.

B. Unless the legislature specifically authorizes ARRA to utilize the American Registry of Radiologic Technologists or equivalent training, the authorities contained in the MRTBE statutes would not exist. Currently, for the ARRA to adopt rules relating to technologists, the rules would be limited to radiation safety training and the hazards of excessive radiation exposure (§30-654 B.9. A.R.S.) and not how well a technologist knows such subjects as anatomy, positioning of patients (except when it may affect radiation safety), any criminal behavior, or other unprofessional conduct.

C. What is more important, the rule adoption process will cost $40,000 or more to complete. Further, since Arizona has had the MRTBE program for years, we will have to go to other states to get data to justify the need for such rules. Arizona has no current data on the violation or overexposure rates for non-certified practice. We will have to find a state who is keeping such data and hope it will fit Arizona.

D. Even more to the point, this report is asking an Agency which according to national standards needs 14 additional personnel, to take on at least 2 FTE additional work without the additional resources. The review by individuals with 60 years experiences in managing radiation programs indicates an increased staffing need, yet this report proposes to remove two FTE from MRTBE and not provide the needed resources to ARRA. The Auditor General's own report at page 8, paragraph 5, indicates a staffing need for MRTBE in the form of an investigator, and the prior report on ARRA indicated that ARRA could catch up in three years on their inspection only by achieving at least 450 inspections per year per x-ray inspector, not having to replace any x-ray inspectors, and if the rate of increase in x-ray units in Arizona does not maintain it historical rate. The Auditor General apparently is unaware that the ARRA has had to replace two inspectors since their report in 1995 on ARRA. Again, this report is recommending that a workload equal to two FTE be added to ARRA without corresponding resources. Although this is passingly acknowledged in the report, as phrased, it minimizes the impact on ARRA inspections. ARRA believes that the proposed finding if adopted, is only shifting the personnel qualification review from the in house staff to the field staff where it is more difficult and man power intensive to accomplish, particularly for non ARRT Technologists.

In addition, as provided in the finding, no provision is made for the approval of schools which do not meet the ARRT requirements, yet are training limited

technologists. The concept of having these schools give the ARRT examination will not work because the ARRT will not allow the schools to give their examination. Further, for the last two years, only an average of 40 % of these schools are passing the ARRT examination. We see no way for the ARRA not to be in the testing of potential users replacing MRTBE as the unbiased processor of the test, but only if authorized by the legislature with adequate resources.

E. Unless the MRTBE Board is made a part of ARRA, ARRA does not have the expertise that is available through the MRTBE to approve x-ray schools or tests for those technologists who are not able to take the ARRT exam. Such technologists represent about 10% of the practicing technologists. This would be of particular concern in the rural areas of the state.

10, Para. 1 — The attached letters from Kansas, Michigan, and Missouri do not support these statements. Further, unless an analysis was made of the statutory authority of each state, the conclusion is not valid.

10, Para. 2 — The licensing requirements of the Nuclear Regulatory Commission are followed for this particular class of technologists. This practice is specifically authorized by §30-654 B.6 and §30-672 A. For x-ray usage, §30-654 B.9 and §30-671 appear to limit the training the ARRA may require since all x-rays would be given at the direction of a licensed practioner of the healing arts.

10, Ftn 2 — The attached letters from Michigan and Missouri appear to contradict the statements in this footnote, further, there appears to have been no attempt to confirm that Arizona's legislative authority to ARRA is the same or stronger than South Carolina or the other states. Without a comparison of the legislative authority of each state, as well as the rules of each state, the footnote is unsupported as to the conclusion reached.

STATE OF MICHIGAN

John Engler, Governor

DEPARTMENT OF COMMERCE

Kathleen M. Wilbur, Director

Bureau of Health Systems
3423 M.L. King Jr., Blvd.
P.O. Box 30195
Lansing, Michigan 48909

April 15, 1996

Aubrey V. Godwin, Director
Arizona Radiation Regulatory Agency
4814 South 40th Street
Phoenix, Arizona 85040

Dear Mr. Godwin:

As requested during our telephone conversation on April 15, 1996 concerning x-ray technologist certification and training, the letter is to clarify the current requirements in the state of Michigan.

Under Part 14 of the Ionizing Radiation Rules of the state of Michigan, an individual, other than a physician, who operates a **mammography machine** shall meet qualification requirements. These include training and certification requirements along with a requirement for continuing education. For individuals that operate x-ray machines other than mammography, Michigan currently has no certification or training requirement other than requirements that the licensee or registrant instruct workers in radiation safety.

Should there be any further questions regarding this, please contact us at (517) 335-8220.

Sincerely,

Donald E. Parry, Health Physicist
Radiation Safety Section
DIVISION OF HEALTH FACILITIES
AND SERVICES

DEP/

MISSOURI DEPARTMENT OF HEALTH

Mel Carnahan
Governor

Coleen Kivlahan, M.D., M.S.P.H.
Director

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April 16, 1996

Aubrey Godwin
Arizona Radiation Regulatory Agency
Phoenix, Arizona
(602)437-0705

Dear Mr. Godwin:

I do vaguely recall speaking with some one with the Arizona Auditor's office about a month or so ago.

To clarify our state's general actions insofar as radiological technologists go:

(1)A Technologist licensing bill has been brought up and defeated before our legislature for the past several years.

(2)In lieu of licensing, as we currently have no requirements for either education or experience, (except in mammography), there has been discussion of requiring minimum standards for training of technologists; which, without a licensing board in place, these standards would presumably be enforced and confirmed by the Medical Radiation Control Program at the time of inspection. However, let me stress that this proposal is extremely preliminary in nature. It is neither regulation or program policy at this time.

(3)As of June 1st of 1996, during our inspections, we will begin surveying amounts of training obtained by personnel taking x-rays, if they are not registered. However, this will be for information gathering purposes only, for future application of data under the proposed number (2) above. There is not now and will not be for the foreseeable future any regulatory adverse impact on the facilities as a result of the survey.

(4)Until June 1, 1996, in the past 30 years of our program, again, except for mammography, we have never checked, surveyed, confirmed, or otherwise inquired as to the qualifications of radiation machine operators. (As we have no qualifications to meet, except for those technologists performing mammography.)

Sincerely,

John Langston, Supervisor
Medical Radiation Control Program
Missouri Department of Health

State of Kansas

Bill Graves Governor

Department of Health and Environment

James J. O'Connell, Secretary

April 17, 1996

AUBREY GODWIN DIRECTOR
ARIZONA RADIATION REGULATORY AGENCY
4814 SOUTH 40TH STREET
PHOENIX AZ 85040

Dear Mr. Godwin:

This is in reference to your call of April 15, 1996 relating to the "certification" of x-ray operators. You had indicated that we were one of several states who were questioned concerning the certification of X-ray unit operators by the state. I or my staff would have answered that we have no regulation or statutory authority to certify any para-professional. That has been reserved for a board established some years ago including as permanent members the secretaries of various state agencies including the Department of Health and Environment. This group has not chosen to establish a certification program for x-ray users.

We have used K.A.R. 28-35-242 (d)(3) and (4) which require the registrant or the registrant's agent to assure..."Individuals who will be operating the x-ray systems shall be adequately instructed in the safe operating procedures and be competent in safe use of the equipment"....and ....be provided with written safety procedures....

We have, where questions of adequate training are identified during an inspection, asked to see the documentation of training and the certification by the facility that the operators are trained. These inquiries have resulted in some very poorly trained persons being sent for training at a facility with such a program. The number of cases where actual citations for non-compliance have been issued are very few, one or two in 32 years. The problem is that the ability of the inspector to see the more subtle problems that may result from poor training is limited. The ability to prove such is even more difficult.

We cannot, of course, judge whether a state certification program is more effective in this regard since we have never had one with which to compare our results. It is perhaps one of those self evident truths that if someone has developed a statewide standard it should become after time and enforcement at least the minimum

Division of Environment, Bureau of Air and Radiation

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level of training for users and in turn impact the level of safety in a positive way. We have no way to judge that objectively at this agency.

Sincerely,

Gerald W. Allen, Chief
Radioactive Materials & X-ray Section
Bureau of Air and Radiation
Radiation Control Program

GWA/psw