



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

April 7, 1992

Received
5/26/92 - 136W

5/27/92
L. J. Blanton

5/27/92
R. W. Blanton

MEMORANDUM FOR: Vandy L. Miller, Assistant Director, State Agreements Program,
State Programs

THRU: Richard Woodruff, Senior Project Manager, State Programs

FROM: B. J. Holt, State Agreements Officer, Region III

Richard Blanton, Health Physicist, State Agreements Program,
State Programs

SUBJECT: KANSAS REVIEW VISIT

Visit Dates: March 4-5, 1992

Last Review Dates: January 28 - February 1, 1992

Next Review Dates: February, 1993 (tentative)

SCOPE OF VISIT

A review visit of the Kansas radiation control program for agreement materials was conducted in Topeka, Kansas by B. J. Holt and Richard Blanton. The visit included discussions on the overall administration of the radiation control program (RCP), a review of incidents and alleged incidents reported to the State in 1991, and selected reviews of licensing and compliance casework. The State was represented by Gerald Allen, Chief, X-Ray and Radioactive Materials Control Section. Discussions were also held with Harold Spiker, Chief, Radiological Environmental Surveillance and Emergency Planning Section, and members of the RCP technical staff: Vick Cooper, Bart Lago, and James Johnson. An exit meeting was held with Gerald Allen and Stephen Paige, Director, Bureau of Environmental Health Services.

STATUS OF PREVIOUS REVIEW COMMENTS AND RECOMMENDATIONS

During the last program review, the Kansas radiation control program for agreement materials was found to be adequate to protect public health and safety. A finding of compatibility was withheld because the State had not adopted five regulatory amendments that are matters of compatibility. At the time of the visit the amendments still had not been adopted, but they had been reviewed and approved by management in the Department of Health and Environment, including the Department's legal office. The proposed amendments are part of a larger rules revision package which includes amendments to the Department's regulations for X-ray machines and accelerators. The Department must resolve several issues associated with the proposed amendments to the accelerator regulations prior to submitting the revision package to the

9306080363 930503
PDR COMMS NRCC
CORRESPONDENCE PDR

Division of Administration for review and approval. Gerald Allen estimates an additional six months is required before the rules will be promulgated. The State was encouraged to continue the rules revision process and to adopt the rules that are matters of compatibility as quickly as possible.

Two minor comments and recommendations were also made during the last program review. One involved a modification to the State's procedures for terminating licenses and the other recommended that the State eradicate a small inspection backlog. According to Allen, the RCP is now notifying the NRC and other Agreement States when radioactive materials are being transferred to licensees under their jurisdiction. The procedures documenting this change, however, were not readily available and thus, not reviewed during the visit. The State has eradicated the minor inspection backlog identified during the previous review.

CURRENT OBSERVATIONS

1. The Governor of Kansas had proposed another reorganization to split the Department of Health and Environment into two separate agencies. The speculation was that the RCP would be part of the Department of Environment. The proposal did not pass the Senate this legislative session but may be introduced at a later date. Gerald Allen indicated that a reorganization of this type would have minimal impact on the routine operations of the RCP.

A bill opposing the NRC's proposed BRC policy was introduced by State legislators approximately one year ago, but the bill died in committee.

2. Bob Hayes resigned from the RCP in August 1991 to accept a position with the EPA. He has been replaced by James Johnson. Johnson has a B.S. degree in Life Sciences and an M.P.H. degree in Environmental Management. He has experience in regulatory compliance with two government agencies, the Missouri Department of Natural Resources and the Oklahoma City County Health Department, but little training or experience with radioactive materials. He has been with the Kansas RCP approximately two weeks and should be placed on the priority list for NRC training courses.
3. Regulations Update: The RCP has included in its rules revision package requirements for financial sureties for decommissioning and misadministration reporting. The NRC has reviewed and commented on the proposed amendments.

The RCP has no current plans to adopt the rule on emergency plans, 10 CFR 30.32(i), because the State has no current licensees for whom the rule is applicable. We will need to advise Allen on the appropriateness of this position since the rule on emergency plans is a matter of compatibility.

Gerald Allen does not foresee any major problems with adopting and implementing the new Part 20 rules for material licensees by January 1994. The rule in its current form will, however, be a problem for x-ray users to implement. The administrative and technical concerns will be resolved in the Suggested State Regulations, but the revised SSR may not be available until after January 1994. Training operators and users will be a difficult task.

4. Twenty-three reports of incidents and alleged incidents involving radioactive materials were received by the State in 1991. Half of the reports involved NARM or NORM materials, particularly contaminated scrap containing radium in pipe scale. All twenty-three reports were reviewed during the visit. Overall the State responded satisfactorily to incidents which warranted a response to protect public health and safety. In two incidents, however, it does not appear that the State investigated the circumstances in sufficient detail to determine if enforcement actions were warranted. These incidents, involving Alpha Omega Geotech and Cotton Houston, were discussed in detail with the staff and with Gerald Allen. The State agreed to review their procedures for initiating enforcement actions following a reported incident.
5. Twelve licensing files and six compliance files were reviewed during the visit. Specific comments on the file reviews were discussed with the staff and are summarized in the attachment. Some files had missing documents or inadequate documentation to track or, in a couple of cases, support the regulatory action taken by the State. The problem, in part, can be attributed to the fact that the RCP does not have adequate secretarial or clerical support. The RCP shares the efforts of one clerical employee with the x-ray, environmental surveillance and emergency planning staffs. The technical staff is assigned clerical duties including the filing of license and inspection documents.
6. The State has an organized file of NRC Information Notices. Most of the notices applicable to material licensees are categorized in the RCP computer system. The notices, however, are not provided to State licensees. An updated list of Information Notices applicable to NMSS licensees (dated December 1991) was provided to Gerald Allen with a suggestion that this list be reviewed and that pertinent ones issued within the last two years be sent to State licensees. Summaries of the contents of the INs may also be provided in the newsletter published by the RCP.
7. The State has increased its fees for material licenses to 100% direct program cost plus 10% overhead. A schedule of the new fees is attached.
8. The State has finalized its Radiation Emergency Handbook. The handbook was reviewed during the visit and the information contained in it appears to be complete, carefully thought out and well written. It defines the responsibilities and actions to be taken by state and local governmental

agencies, ambulance services, and hospital and emergency room personnel. It also provides general and specific guidance for handling incidents involving spills, radioactive dusts, fumes, and gases, fires, sealed sources and contaminated personnel.

9. Kansas Issues of Regulatory Concern:

The Coleman Company

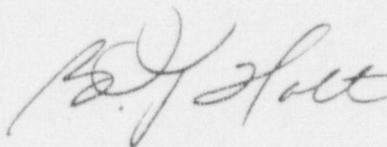
The Coleman Company (Coleman Outdoor Products) in Wichita, Kansas has ceased operations with thorium and plans to move the mantle production business to a new location. (In the new location, yttrium nitrate will be used instead of thorium.) A copy of the site characterization survey report, conducted by General Dynamics, was provided to the State in May 1990. In December 1990, General Dynamics was hired to decontaminate selected pieces of equipment used in mantle production. The State took confirmatory measurements of selected decontaminated equipment. During the summer of 1991, the State met with the licensee to inform them that a decommissioning plan will need to be submitted and approved by the State prior to conducting additional clean-up activities. To date, a decommissioning plan has not been submitted. The State will require guidance from the NRC in determining the release criteria prior to approving the decommissioning plan.

Century Instrument Corporation/Aero Instruments

The State is investigating two licensees involved in stripping radium coatings from the dials and pointers of aircraft instruments. The problem was identified when a rail car containing contaminated scrap set off the radiation monitoring system at a facility in Arkansas. The contamination was identified as radium-226 and the scrap material was found to have come from Century Instrument Corporation. The company is licensed to possess aircraft parts containing radium-226 but activities involving handling of the radium are prohibited. The owner of Century Instrument claims that he was unaware of this activity and that it was sanctioned by the general manager. The State assessed Century Instrument a civil penalty of \$10,000. Century Instrument is making arrangements to have the rail car decontaminated. The general manager, who was fired by Century Instrument under a cloud of controversy and litigation, formed a new company in June, 1991, Aero Instruments. Aero Instruments is not licensed to possess radioactive materials, but amidst rumors and allegations, the State inspected the facility in January and February 1992 and found evidence of radium contamination. The founder of Aero Instruments and former General Manager of Century Instrument Corporation was co-founder of Aircraft Instrument and Development (AID). In 1979, AID was shut down and an emergency clean-up was ordered because of radium contamination. At the time of the visit, the RCP was preparing information for the State's legal staff to order the cessation of operations at Aero Instruments and possible civil penalties and other legal action against the founder.

Conclusions

The State is making progress on the adoption of regulations deemed to be a matter of compatibility by the NRC, but the amendments are part of a larger rules revision with proposed changes to the rules governing radiation machines as well as radioactive materials. Pertinent information contained in Information Notices generated by the NRC is not being provided to State licensees. State licensees, therefore, do not have the benefit of being alerted to generic issues, concerns, and incidents affecting users of radioactive materials. No major problems were noted during the review of licensing and compliance casework, however, some license files contained missing documents or inadequate documentation. Complete documentation is needed in order to justify and support regulatory action taken by the State. File maintenance and the distribution of "Information Notices" are tasks which are more efficiently accomplished with assistance from clerical staff. This also allows for more productive use of the technical staff. The Kansas Radiation Control Program for Agreement Materials lacks adequate secretarial and clerical support.



B. J. Holt
State Agreements Program Officer
Region III

Enclosures:

1. Licensing File Review
2. Compliance File Review
3. Organizational Chart
4. Fee Schedule

cc w/enclosures:

Gerald Allen, Chief

X-Ray and Radioactive Materials

Kansas Department of Health and Environment

Stephen Paige, Director

Bureau of Environmental Health Services

Kansas Department of Health and Environment

Robert Doda, State Agreements Officer, Region IV

LICENSING FILE REVIEW

Twelve licensing files were reviewed during the 1992 review visit of the Kansas Radiation Control Program for Agreement Materials

File No. 1

Licensee: Mobilc Clinical Services, Inc.
License #: 19-C650-01
Location: Salina
License Type: Mobile Nuclear Medicine
Expires: 10/31/92
Type of Licensing Action: Amendment to add user

File No. 2

Licensee: Kansas Department of Transportation
Location: Topeka
License #: 22-B315-01
License Type: Portable Gauge
Expires: 9/30/93
Type of licensing Action: Simple Renewal

File No. 3

Licensee: Mercury Wireline, Incorporated
License #: 27-B436-01
Location: Hays
License Type: Well Logging
Expires: 9/30/92
Type of licensing Action: Amendment to add sources

File No. 4

Licensee: Intermountain Testing Company
License #: 21-B389-01
Location: Engelwood, CO (Kansas field office: Liberal)
License Type: Industrial Radiography
Expires: 12/31/92
Type of licensing Action: Simple Renewal

File No. 5

Licensee: Kansas State University
License #: 38-C011-01
Location: Mahatten
License Type: Academic
Expires: 6/30/93
Type of licensing Action: Simple Renewal with amendment

File No. 6

Licensee: Alpha-Omega Geotech, Inc.
License #: 22-B566-01
Location: Kansas City
License Type: Portable Gauge
Expires:
Type of licensing Action: Renewal

File No. 7
 Licensee: Clay County Hospital
 License #: 12-B477-01
 Location: Clay
 License Type: Group Medical
 Type of licensing action: Termination

File No. 8
 Licensee: Environmental Health Services
 License #: 22-B631-01
 Location: Springfield, MO
 License Type: X-ray Fluorescence Analyzer
 Type of licensing action: Termination

File No. 9
 Licensee: Environmental Laboratories, Inc.
 License #: 22-B592-01
 Location: Topeka
 License Type: Gas Chromatograph
 Type of licensing action: Termination

File No. 10
 Licensee: Plains Environmental Services
 License #: 22-B628-01
 Location: Salina
 License Type: Gas Chromatograph
 Type of licensing action: Termination

File No. 11
 Licensee: Exxon Chemical Corporation
 License #: 22-B598-01
 Location: Kingsman
 License Type: X-ray Fluorescence Analyzer
 Type of licensing action: Termination

File No. 12
 Licensee: Immune Biotech
 License #: 36-B624-01
 Location: Prairie Village
 License Type: Invitro Studies
 Type of licensing action: Termination

SUMMARY OF COMMENTS

<u>Comment</u>	<u>File No.</u>
Missing correspondence or supporting documentation	4, 6, 8
No record of amendment request evaluation	5
Sealed source misidentified on license	3

COMPLIANCE FILE REVIEW

Six compliance files were reviewed during the 1992 review visit of the Kansas Radiation Control Program for Agreement Materials

File No. 1

Licensee: Mobile Clinical Services, Inc.
License #: 19-C650-01
Location: Salina
License Type: Mobile Nuclear Medicine
Expires: 10/31/92

File No. 2

Licensee: Kansas Department of Transportation
Location: Topeka
License #: 22-B315-01
License Type: Portable Gauge
Expires: 9/30/93

File No. 3

Licensee: Mercury Wireline, Incorporated
License #: 27-B436-01
Location: Hays
License Type: Well Logging
Expires: 9/30/92

File No. 4

Licensee: Intermountain Testing Company
License #: 21-B389-01
Location: Engelwood, CO (Kansas field office: Liberal)
License Type: Industrial Radiography
Expires: 12/31/92

File No. 5

Licensee: Kansas State University
License #: 38-C011-01
Location: Mahatten
License Type: Academic
Expires: 6/30/93

File No. 6

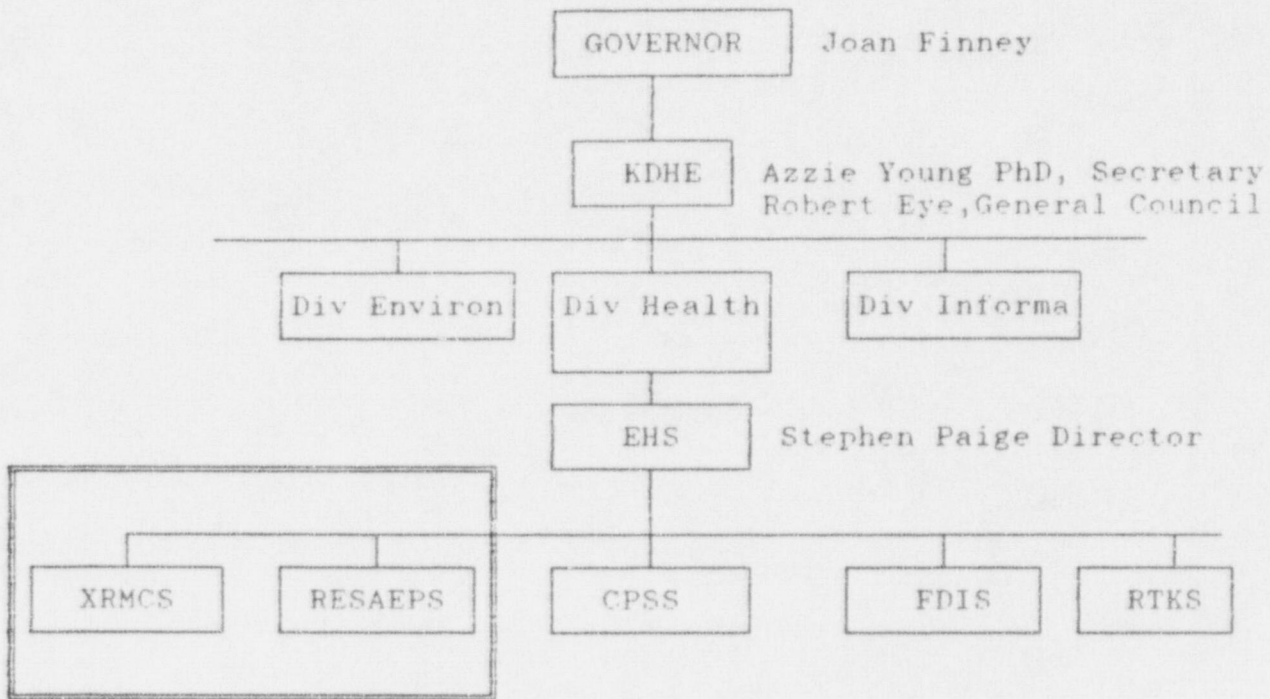
Licensee: Newton Healthcare Corporation
Location: Newton
License Type: Institutional Nuclear Medicine

SUMMARY OF COMMENTS - COMPLIANCE FILE REVIEWS

<u>Comment</u>	<u>File No.</u>
Inspection report not in file (more than 30 days after the inspection)	2, 6
Non-compliance letter not sent within 30 days (no record of extenuating circumstances)	1, 3
Typographical errors in the inspection report or correspondence	5
Correspondence missing from file	4
No explanation in file for an unscheduled inspection	1
No supporting documentation for citation	3

8/26/91

ORGANIZATIONAL CHART
of
STATE OF KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT
through the
BUREAU OF ENVIRONMENTAL HEALTH SERVICES
to the level of
RADIATION CONTROL PROGRAM



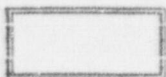
KDHE = Kansas Department of Health and Environment
(Dr. Azzie Young Secretary)

Div Health = Division of Health
(Vacant)

EHS = Bureau of Environmental Health Services
(Stephen Paige Director)

XRMCS = X-Ray and Radioactive Materials Control Section
(Gerald Allen Chief)

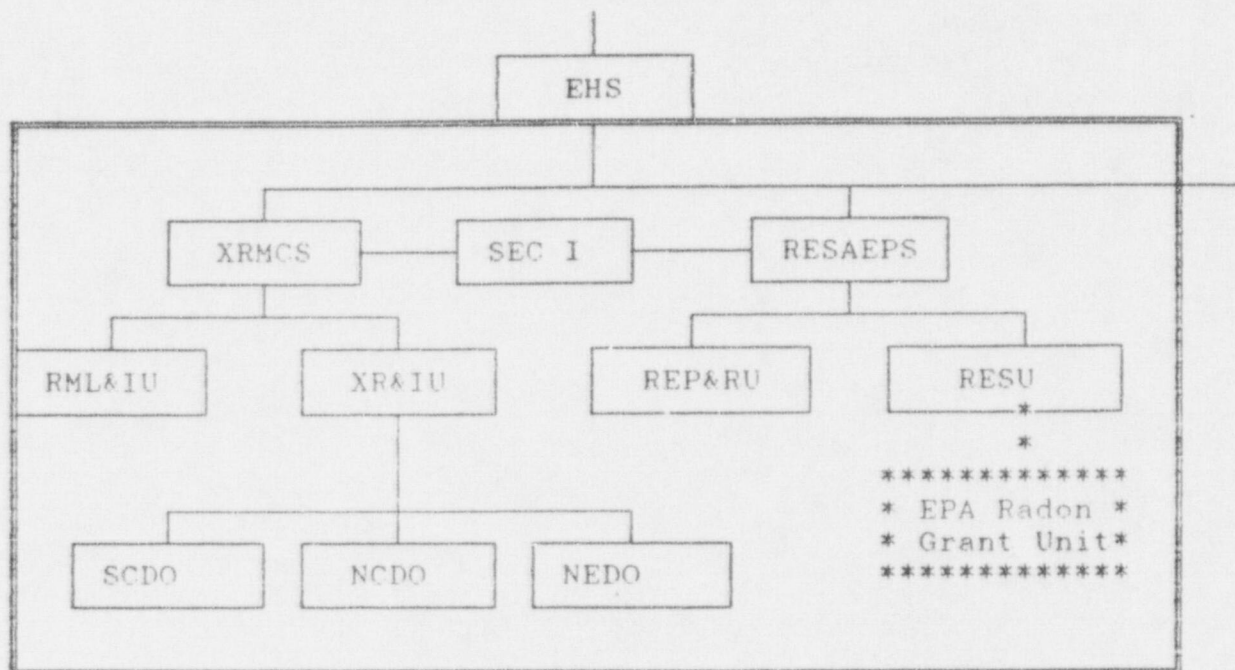
RESAEPS = Radiological Environmental Surveillance and Emergency
Planning Section
(Harold Spiker Chief)



Radiation Control Program

3/02/92

ORGANIZATIONAL CHART
of
RADIATION CONTROL PROGRAM
of
STATE OF KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT



EHS = BUREAU OF ENVIRONMENTAL HEALTH SERVICES (Stephen Paige Director)

XRMCS = X-RAY AND RADIOACTIVE MATERIALS CONTROL SECTION (Gerald Allen Chief)

RML&IU = RADIOACTIVE MATERIALS LICENSING AND INSPECTION UNIT (Staff Vick Cooper, James Johnson, Bart Lago)

XR&IU = X-RAY REGISTRATION AND INSPECTION UNIT (Staff Ivan Schmidt and district office x-ray personnel)

SCDO, NCDO & NEDO = SOUTHCENTRAL DISTRICT OFFICE, NORTHCENTRAL DISTRICT OFFICE AND NORTHEAST DISTRICT OFFICE (Staff Wes Spencer, Gary Hass and Lyle Coulter)

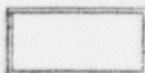
RSAEPS = RADIOLOGICAL ENVIRONMENTAL SURVEILLANCE AND EMERGENCY PLANNING SECTION (Harold Spiker Chief)

REP&RU = RADIATION EMERGENCY PLANNING AND RESPONSE UNIT (Staff one PHP [Vacant] and Kim Steves)

RESU = RADIOLOGICAL ENVIRONMENTAL SURVEILLANCE UNIT (Staff David Whitfill)

EPA Radon Grant Staff (1/2 Clerk, Darlene Murray, 1 RCI [Vacant])

SEC I = PROGRAM SECRETARY (Staff Pam Watson)



Radiation Control Program

28-35-145. License and registration fees. (a) Each person who applies for a license, amendment to a license, or a renewal of a license pursuant to K.S.A. 48-1607, and any amendments thereto, shall pay a fee based on the cost of providing and servicing the license.

(b) Each person who registers an item shall pay a fee based on the cost of providing and servicing the registration. All items shall be registered annually within 30 days of receipt of a notice of registration from the department or within 30 days of obtaining a registrable device. (Authorized by and implementing K.S.A. 1985 Supp. 48-1606, effective May 1, 1987.)

Kansas Department of Health and Environment
Amended Regulation

28-35-146. License and registration fee requirements. (a) In general, a fee, as prescribed in these regulations shall be required for licensed radioactive, by-product, source, or special nuclear materials, except no A fee shall not be required for:

(1) Any license authorizing the use of source material used only as shielding for devices and containers; or

(2) any general license issued under K.A.R. 28-35-178a through 28-35-178i and any amendment to those regulations.

(b) License fees. Each application for which a license fee is required shall be accompanied by the full amount of the fee. No application shall be accepted for filing or processed prior to payment of the full amount specified. Applications for which no a remittance fee is not received may be returned to the applicant. All fees shall be charged irrespective of the department's disposition of the application or a withdrawal of the application. Fees shall not be returned regardless of:

(1) the department's approval or disapproval of the application; or

(2) the withdrawal of the application.

(c) Amendment fees. The appropriate license amendment fee shall accompany each application for amendment of the provisions of a license. If the applicant is applying for an amendment of a license under K.A.R. 28-35-147(a)(15) or 28-35-147(a)(23) and any amendments thereto, the applicant shall tentatively determine whether the amendment is an administrative amendment or an amendment with safety and environmental considerations. The applicant shall state the basis for this determination as a part of the application and shall remit the fee corresponding to this determination with the application for amendment. The department shall examine the amendment fee, and shall, if necessary, refund any overcharges or bill the applicant for any additional amendment fees. The department shall review each application and

fee determination. After the review the department may: (1) Accept the amount determined;

(2) return to the applicant any overcharges; or

(3) bill the applicant for any additional amendment fee.

(d) License for multi-purpose use fees. If the applicant is applying for an amendment or a new license authorizing more than one of the uses described under K.A.R. 28-35-147, the fee appropriate to the most costly use shall be remitted applicant shall submit the highest fee established for the uses requested.

~~(d)~~ (e) Registration. Each registration submitted under K.A.R. 28-35-153, 28-35-154 or 28-35-157 shall be accompanied by the full amount of the fee.

~~(e)~~ (f) Maximum registration payments. Each registrant possessing medical x-ray machines in a hospital shall pay no more than \$200.00 per year regardless of the number of machines. Each registrant possessing medical or dental x-ray machines in a hospital, clinics clinic or private offices office shall pay no more than \$150.00 per year regardless of the number of machines.

~~(f)~~ (g) Method of payment. Fee payment shall be by check, draft, or money order made payable to the department of health and environment.

~~(g)~~ (h) Applicability. This regulation shall apply to all applications for licenses, amendments to licenses, permits, registrations or renewals filed with the department on or after the effective date of this regulation. (Authorized by and implementing K.S.A. 1986 Supp. 48-1606, effective May 1, 1987; amended May 1, 1988.)

Kansas Department of Health and Environment
Amended Regulation

28-35-147. Schedule of fees. (a) The following license fees shall be paid as provided in K.A.R. 28-35-147, and any amendments.

(1) Licenses for possession and use of special nuclear material in sealed sources that are contained in devices used in industrial measuring systems.

Cost: New ~~\$102.00~~ \$500.00
Amendment ~~\$100.00~~ \$300.00

(2) Any other licenses for possession and use of special nuclear material, except those listed in paragraph (1) and paragraphs (16) through (24) of this subsection.

Cost: New \$1,200.00
Amendment ~~\$110.00~~ \$300.00

(3) All source material licenses, except those listed in paragraphs (16) through (24) of this subsection.

Cost: New \$600.00
Amendment ~~\$100.00~~ \$300.00

(4) Licenses for possession and use of radioactive or byproduct material for the purpose of processing or manufacturing items containing radioactive or byproduct material for commercial distribution, where more than one radionuclide is used for commercial distribution, where more than one radionuclide is used or the handling of unsealed sources is required.

Cost: New \$2,000.00
Amendment ~~\$110.00~~ \$300.00

(5) Licenses for possession and use of radioactive or byproduct material for processing or manufacturing items containing radioactive or by-product material for commercial distribution, where only one radionuclide is used and only sealed sources are handled.

Cost: New \$1200.00
Amendment ~~\$110.00~~ \$300.00

(6) Licenses for possession and use of radioactive or by-product material for processing, manufacturing or distributing radiopharmaceuticals containing radioactive or by-product material.

Cost: New \$800.00
Amendment ~~\$100.00~~ \$300.00

(7) Licenses for possession and use of radioactive or byproduct materials in permanent, shielded facilities for

industrial radiography.

Cost: New ~~\$2,000.00~~ \$2,500.00
Amendment ~~\$100.00~~ \$500.00

(8) Licenses for possession and use of industrial radiography devices in permanent, shielded facilities and on multiple temporary job sites.

Cost: New ~~\$2,000.00~~ \$2,500.00
Amendment ~~\$100.00~~ \$500.00

(9) Licenses for possession and use of radioactive or by-product material for irradiation of material in which the source is not removed from its shield for irradiation purposes.

Cost: ~~\$380.00~~ \$500.00
Amendment ~~\$100.00~~ \$400.00

(10) Licenses for possession and use of radioactive or by-product material for irradiation of material in which the source is removed from its shield for irradiation purposes.

Cost: New ~~\$1,200.00~~ \$3,000.00
Amendment ~~\$110.00~~ \$500.00

(11) Licenses authorizing distribution of radioactive or by-product materials to persons generally licensed as provided in K.A.R. 28-35-175 to 20-35-200, inclusive, and amendments.

Cost: New ~~\$1,000.00~~ \$1,500.00
Amendment ~~\$230.00~~ \$700.00

(12) Licenses authorizing distribution of radioactive or by-product material to persons exempt from the licensing requirement of K.A.R. 28-35-175 to 28-35-200, inclusive, and amendments thereto.

Cost: New ~~\$1,000.00~~ \$1,600.00
Amendment ~~\$230.00~~ \$800.00

(13) Licenses for possession and use of radioactive or by-product material for research and development, except those licenses covered by paragraph (4), (5) (6) (19)(B) or (C) of this subsection.

Cost: New ~~\$1,000.00~~ \$1,400.00
Amendment ~~\$100.00~~ \$600.00

(14) Licenses for possession and use of radioactive or by-product material, except those listed in paragraphs (4) through (24) of this subsection.

Cost: New ~~\$300.00~~ \$600.00

Amendment ~~\$100.00~~ \$300.00

(15) Licenses specifically authorizing the receipt of radioactive, by-product, source, or special nuclear material wastes from other persons for the purpose of packaging of material.

Cost: New ~~\$1,400.00~~ \$2,000.00
Amendment, Safety and Environment ~~\$570.00~~ \$800.00
Administrative (No safety or
environmental questions) ~~\$150.00~~ \$450.00

(16) Licenses specifically authorizing the receipt of packaged radioactive, by-product, source, or special nuclear material wastes from other persons.

Cost: New ~~\$500.00~~ \$1,000.00
Amendment ~~\$120.00~~ \$500.00

(17) Licenses specifically authorizing possession and use of radioactive, by-product, source, or special nuclear material for well logging, well surveys, or tracer studies.

Cost: New ~~\$800.00~~ \$1000.00
Amendment ~~\$110.00~~ \$500.00

(18) Licenses specifically authorizing commercial collection and laundry of item contaminated with radioactive, by-product, source or special nuclear material.

Cost: New \$800.00
Amendment ~~\$110.00~~ \$300.00

(19) Licenses specifically authorizing the medical use of radioactive, source, by-product, or special nuclear materials.

(A) License authorizing the use of radioactive, or by-product material in sealed sources contained in teletherapy devices.

Cost: New ~~\$500.00~~ \$1,500.00
Amendment ~~\$100.00~~ \$500.00

(B) Licenses authorizing the use of radioactive, by-product, source, or special nuclear material in a medical institution or by two or more physicians, for medical purposes, except licenses covered in paragraph 19(A) above.

Cost: New ~~\$600.00~~ \$700.00
Amendment ~~\$100.00~~ \$300.00

(C) Licenses authorizing the use of radioactive, byproduct, source, or special nuclear material by private physicians for medical purposes, except licenses covered in paragraph (19)(A) above.

Cost: New ~~\$300.00~~ \$500.00

Amendment ~~\$100.00~~ \$300.00

(20) Licenses authorizing possession and use of radioactive, by-product, source or special nuclear material or civil defense purposes.

Cost: New ~~\$300.00~~ \$500.00
Amendment ~~\$100.00~~ \$300.00

(21) Licenses which require a review of a device, product, or sealed source containing radioactive, by-product, source or special nuclear material for distribution to general licensees or persons exempt from licensing.

Cost: Each device, product or sealed source review
~~\$570.00~~ \$1500.00

(22) Licenses authorizing the manufacturing and distribution of encapsulated radioactive, by-product, source, or special nuclear material in a device that uses decay heat as a source of power.

Cost: New \$3,500.00
Amendment \$470.00

(23) Licenses authorizing the possession and use of waste radioactive, by-product, source or special nuclear material for a commercial low level waste disposal facility.

Cost: New \$300,000.00
Amendment: Safety and Environment \$100,000.00
Administrative (no safety or environment question)
\$1,500.00

(24) Licenses authorizing the possession and use of radioactive materials (Ra-226) in luminous paint or products containing such paint.

Cost: New \$1,000.00
Amendment ~~\$100.00~~ \$300.00

~~*Each amendment involving the complete rewriting of an existing license shall cost the same as a new license.~~

(b) At the request of the licensee, a license shall be renewed by an amendment which changes only the expiration date of the license. The cost shall be that of an amendment. After five amendments containing changes other than the expiration date or 10 years, whichever comes first, the license shall be rewritten and reevaluated in its entirety and the fee shall be the same as that for a new license.

(c) The following registration fees shall be paid pursuant to K.A.R. 28-35-146, and any amendments thereto:

(1) Medical x-ray machines, including those x-ray machines

used in hospitals or clinics by or under the supervision of medical doctors, osteopaths, or chiropractors.

Cost: ~~\$40.00~~ \$56.00 for the first machine and \$13.00 for each additional machine.

(2) Dental x-ray machines, including those machines used in hospitals, dental clinics or private offices by or under the supervision of dentists, podiatrists, and veterinarians.

Cost: ~~\$20.00~~ \$36.00 for the first machine and \$11.00 for each additional machine.

(3) Industrial radiographic machines.

Cost: ~~\$20.00~~ \$36.00 for the first machine and \$11.00 for each additional machine.

(4) Analytical x-ray machines.

Cost: ~~\$20.00~~ \$36.00 for the first machine and \$11.00 for each additional machine.

(5) Particle accelerators.

Cost: ~~\$42.00~~ \$78.00 for each

(Authorized by and implementing K.S.A. 1986 Supp. 48-1606, effective May 1, 1987; amended May 1, 1988, Amended P)