PART 2

ADMINISTRATIVE REGISTER

DECEMBER 1, 1985

VOLUME 12, NUMBER 6

**NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET**
**Department for Surface Mining Reclamation and Enforcement**
**(Proposed Amendment)**

**405 KAR 18:080. Diversions.**

RELATES TO: KRS 350.085, 350.100, 350.151, 350.405, 350.420, 350.465
PURSUANT TO: KRS Chapter 13A, 350.028, 350.100, 350.151, 350.420, 350.465
NECESSITY AND FUNCTION: KRS Chapter 350 in pertinent part requires the cabinet to promulgate rules and regulations establishing performance standards for protection of people and property, land, water and other natural resources, and aesthetic values, during underground mining activities and for restoration and reclamation of surface areas affected by underground mining activities. This regulation sets forth requirements for design and construction of temporary and permanent diversions of overland flow, shallow ground water flow, ephemeral streams, and intermittent and perennial streams.

Section 1. General Requirements. (1) Surface flow from mined areas abandoned before May 3, 1978 and any flow from undisturbed or reclaimed areas, after meeting the criteria of 405 KAR 18:070 and 405 KAR 18:090 for siltation structure removal, may be diverted around the disturbed area and water treatment facilities by means of temporary or permanent diversions.

(2) Diversions shall not be constructed or operated to divert water into underground mines without the approval of the cabinet under 405 KAR 18:060, Section 9.

(3) The design, construction, and maintenance of diversion ditches shall insure public health and safety, protect property, be stable, minimize adverse impacts to the hydrologic balance, and prevent additional contributions of suspended solids to streamflow and to runoff outside the permit area to the extent possible using the best technology currently available. The following criteria are to be incorporated in the design and construction of a diversion ditch:

(a) Freeboard shall be no less than three-tenths (0.3) foot. Protection shall be provided for transition of flows and for critical areas such as swales and curves. Where the area protected is a critical area as determined by the cabinet, the cabinet may require that the design freeboard be increased.

(b) Excess excavated material not necessary for diversion channel geometry or regrading of the channel shall be disposed of in accordance with 405 KAR 18:130 and 405 KAR 18:190.

(c) Topsoil shall be handled in compliance with 405 KAR 18:050.

(d) Channel linings shall be used to prevent erosion of the ditch. The following criteria is to be used unless the cabinet specifies otherwise:

1. All diversion ditches are to be fertilized, seeded, and mulched to comply with the requirements of 405 KAR 18:200 after the ditch is constructed.

2. Riprap shall be used when a diversion ditch is not located in solid rock or the design velocity is five (5) feet per second or greater for the peak discharge used in the design of the ditch. Material used for riprap shall be free of acid-forming material and toxic-forming material and shall comply with the durability requirements of 405 KAR 18:130, Section 1(6)(c)2, except that sand and gravel shall not be used.

(e) Side slopes shall be no steeper than 1h:4v for solid rock, 1h:1v for riprap lined, and 2h:1v for grass lined ditches.

(f) Diversion ditch design capacity shall comply with the provisions of this paragraph, except where a larger capacity is required by other regulations of 405 KAR Chapters 7 through 24 for specific types of diversions or where a larger capacity is required by the cabinet.

1. The channel of any diversion ditch which diverts runoff around a sediment control structure, water treatment facility, or impoundment shall be adequate to pass the peak discharge from the design storm for the hydraulic capacity of the sediment control structure, water treatment facility, or impoundment (i.e. if the impoundment is designed to pass the 100 year, twenty-four (24) hour storm event so shall the ditch).

2. The channel of any diversion ditch which diverts runoff to a sediment control structure or water treatment facility shall be adequate, at a minimum, to pass the peak discharge of a ten (10) year, twenty-four (24) hour storm event.

3. The channel, bank, and flood plain configuration of any diversion ditch, which diverts a perennial or intermittent stream, shall be adequate to pass the peak discharge of a ten (10) year, twenty-four (24) hour storm event for temporary ditches and the 100 year, twenty-four (24) hour event for permanent ditches. However, the capacity of the channel itself shall be equal to or greater than the capacity of the unmodified stream channel immediately upstream and downstream of the diversion.

4. The channel of any other diversion ditch which diverts ephemeral streams or overland flow shall be adequate to pass the peak discharge of the two (2) year, twenty-four (24) hour storm for temporary ditches and the ten (10) year, twenty-four (24) hour storm for permanent ditches.

(4) No diversion shall be located so as to increase the potential for land slides. No diversion shall be constructed on existing land slides, unless approved by the cabinet.

(5) Diversions of perennial streams, intermittent streams and ditches classified under subsection (3)(f)1 of this section shall be designed and certified by a registered professional engineer and after construction shall be inspected and certified by the responsible registered professional engineer as having been constructed in accordance with the approved design plans.

(6) Diversion ditches shall be maintained to pass their respective design storms.

(7)(a) When no longer needed to achieve the purpose for which they were authorized, all temporary diversions shall be removed and the affected land regraded and revegetated, in accordance with 405 KAR 18:050, Sections 4 and 5; 405 KAR 18:190; and 405 KAR 18:200. At the time diversions are removed, downstream water treatment facilities previously protected by the diversion shall be modified or removed to prevent overtopping or failure of the facilities. This requirement shall not relieve the permittee from maintenance of a water

treatment facility otherwise required under this Title or the permit.

(b) Each ephemeral stream channel affected by surface coal mining and reclamation operations shall be reclaimed or permanently diverted in a channel designed and constructed so as to restore or approximate the premining characteristics of the original stream channel (including natural riparian vegetation) to promote the recovery and enhancement of the aquatic habitats, except for situations in which a reach of a stream channel cannot be restored to such characteristics because of the existence of an excess spoil fill, permanent stream-crossing, permanent impoundment, or coal mine waste disposal area constructed in accordance with 405 KAR 18:100, 405 KAR 18:130, 405 KAR 18:140, 405 KAR 18:160, and 405 KAR 18:230 as applicable.

Section 2. Diversions of Perennial and Intermittent Streams. (1) Flow from perennial and intermittent streams within the permit area may be diverted, if the diversions:

(a) Are approved by the cabinet after making the findings called for in 405 KAR 18:060, Section 11;

(b) Comply with other requirements of 405 KAR Chapters 7 through 24; and

(c) Comply with applicable local, state, and federal statutes and regulations.

(2) When permanent diversions are constructed or stream channels restored, after temporary divisions, the permittee shall:

(a) Restore, enhance where practicable, or maintain natural riparian vegetation on the banks of the stream;

(b) Establish or restore the stream to an environmentally acceptable meandering shape and gradient, as determined by the cabinet;

(c) Establish or restore the stream to a longitudinal profile and cross-section, including aquatic habitats (usually a pattern of riffles, pools, and drops rather than uniform depth) that approximate premining stream channel characteristics; and

(d) Comply with 405 KAR 18:180.

(3) Where the cabinet approves the placement of a coal refuse pile, coal waste impoundment, or an excess spoil fill in an intermittent or perennial stream under 405 KAR 18:060, Section 11, and it is not practicable to comply with subsection (2) of this section, then the diversion of the stream channel shall comply with the requirements for diversions set forth in the performance standards for those structures.

Section 3. Applicability of Amendments to This Regulation. (1) Except as provided in subsection (2) of this section, the amendments to this regulation shall apply to permits issued on or after ninety (90) days after the effective date of these amendments. Permittees conducting surface coal mining and reclamation operations under permits issued before that date shall comply with the requirements which preceded the amendments, the approved permit application and the conditions of permit issuance.

(2) The provisions of Section 1(3)(f)1 shall apply on and after ninety (90) days after the effective date of these amendments to each surface coal mining and reclamation operation which includes an impoundment classified, pursuant to 405 KAR 7:040, Section 5, as a (B) or (C) structure. Permits issued before that date shall be revised as necessary.

[Section 1. Diversions and Conveyance of Overland Flow and Shallow Ground Water Flow, and Ephemeral Streams. Overland flow, including flow through litter, and shallow ground water flow from undisturbed areas, and flow in ephemeral streams, may be diverted away from disturbed areas by means of temporary or permanent diversions, if required or approved by the cabinet as necessary to minimize erosion, to reduce the volume of water to be treated, and to prevent or remove water from contact with acid-forming and toxic-forming materials. The following requirements shall be met for all diversions and all collection drains that are used to transport waters into water-treatment facilities and for all diversions of overland and shallow ground water flow and ephemeral streams:]

[(1) Temporary diversions shall be constructed to pass safely the peak runoff from a precipitation event with a two (2) year recurrence interval, or a larger event as specified by the cabinet.]

[(2) To protect fills and property and to avoid danger to public health and safety, permanent diversions shall be constructed to pass safely the peak runoff from a precipitation event with a ten (10) year recurrence interval, or a larger event as specified by the cabinet. Permanent diversions shall be constructed with gently sloping banks that are stabilized by vegetation. Asphalt, concrete, or other similar linings shall be used only when approved by the cabinet to prevent seepage or to provide stability.]

[(3) Diversions shall be designed, constructed, and maintained in a manner which prevents additional contributions of suspended solids to streamflow and to runoff outside the permit area, to the extent possible using the best technology currently available. Appropriate sediment control measures for these diversions may include, but not be limited to, maintenance of appropriate gradients, channel lining, revegetation, roughness structures, and detention basins.]

[(4) No diversion shall be located so as to increase the potential for land slides and no diversion shall be constructed on existing slides unless approved by the cabinet.]

[(5) When no longer needed, each temporary diversion shall be removed and the affected land regraded, topsoiled, and revegetated in accordance with 405 KAR 18:050, Sections 4 and 5, 405 KAR 18:190, and 405 KAR 18:200.]

[(6) Diversion design shall incorporate the following:]

[(a) Channel linings shall be designed using standard engineering practices to safely pass the design velocities. Riprap shall comply with the requirements of 405 KAR 18:130, Section 2(2)(d), except that sand and gravel shall not be used.]

[(b) Freeboard shall be no less than 0.3 feet. Protection shall be provided for transition of flows and for critical areas such as swales and curves. Where the area protected is a critical area as determined by the cabinet, the design freeboard may be increased.]

[(c) Energy dissipators shall be installed, when necessary, at discharge points where diversions intersect with natural streams and

exit velocity of the diversion ditch flow is greater than that of the receiving stream.]

[(d) Excess excavated material not necessary for diversion channel geometry or regrading of the channel shall be disposed of in accordance with 405 KAR 18:130.]

[(e) Topsoil removed from the diversion excavations shall be handled in accordance with 405 KAR 18:050.]

[(7) Diversions shall not be constructed or operated to divert water into underground mines without the approval of the cabinet under 405 KAR 18:060, Section 7.]

[Section 2. Stream Channel Diversions. (1) Flow from perennial and intermittent streams within the permit area may be diverted if the diversions:]

[(a) Are approved by the cabinet after making the findings called for in 405 KAR 18:060, Section 9;]

[(b) Comply with other requirements of Title 405, Chapters 16 through 20; and]

[(c) Comply with applicable local, state, and federal statutes and regulations.]

[(2) When streamflow is allowed to be diverted, the stream channel diversion shall be designed, constructed, and removed, in accordance with the following:]

[(a) The longitudinal profile of the stream, the channel, and the floodplain shall be designed and constructed to remain stable and to prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow or to runoff outside the permit area. These contributions shall not be in excess of requirements of state or federal law. Erosion control structures such as channel lining structures, retention basins, and artificial channel roughness structures shall be used in diversions only when approved by the cabinet as being necessary to control erosion. These structures shall be approved for permanent diversions only where they are stable and will require infrequent maintenance.]

[(b) The combination of channel, bank, and floodplain configurations shall be adequate to pass safely the peak runoff of a ten (10) year, twenty-four (24) hour precipitation event for temporary diversions, a 100-year, twenty-four (24) hour precipitation event for permanent diversions, or larger events, as specified by the cabinet. However, the capacity of the channel itself should be at least equal to the capacity of the unmodified stream channel immediately upstream and downstream of the diversion.]

[(3) When no longer needed to achieve the purpose for which they are authorized, all temporary stream channel diversions shall be removed and the affected land regraded and revegetated, in accordance with 405 KAR 18:050, Sections 4 and 5, 405 KAR 18:190 and 405 KAR 18:200. At the time diversions are removed, downstream water treatment facilities previously protected by the diversion shall be modified or removed to prevent overtopping or failure of the facilities. This requirement shall not relieve the permittee from maintenance of a water treatment facility otherwise required under this Title or the permit.]

[(4) When permanent diversions are constructed or stream channels restored after temporary diversions, the permittee shall:]

[(a) Restore, enhance where practicable, or maintain natural raparian vegetation on the banks of the stream;]

[(b) Establish or restore the stream to an environmentally acceptable meandering shape and gradient, as determined by the cabinet; and]

[(c) Establish or restore the stream to a longitudinal profile and cross section, including aquatic habitats (usually a pattern of riffles, pools, and drops rather than uniform depth) that approximate premining stream channel characteristics.]

CHARLOTTE E. BALDWIN, Secretary

APPROVED BY AGENCY: November 14, 1985

FILED WITH LRC: November 15, 1985 at 11 a.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 30, 1985, at 10 a.m. in Room G-1 of the Capital Plaza Tower. Written comments may be submitted on or before the scheduled hearing date. However, if no written notice of intent to attend and testify at the public hearing is received within five (5) days before the scheduled hearing, the hearing will be cancelled. Those interested in attending and testifying at this hearing shall notify in writing: George Risk, Department for Surface Mining Reclamation and Enforcement, 3rd Floor Capital Plaza Tower, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: George Risk

(1) Type and number of entities affected: These proposed amendments and the proposed amendments to 405 KAR 16:080 will affect less than 100 surface coal mining operations in addition to all operations issued a permit on or after 90 days of the effective date of this amendment. This regulation also affects, directly or indirectly and in varying degrees, persons living in, or with interests in, the coal field regions of Kentucky as well as persons with interests in coal mining.

(a) Direct and indirect costs or savings to those affected:

1. First year: Additional cost to the industry will be minimal. The operators will be required to have a registered professional engineer certify the design and construction of some diversion ditches. Laboratory testing will be required to insure that rock durability requirements are met.

2. Continuing costs or savings: Same as first year.

3. Additional factors increasing or decreasing costs (note any effects upon competition): None.

(b) Reporting and paperwork requirements: Certification of design and certification of construction forms will have to be prepared and presented to the department.

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: No additional cost will be incurred by the department.

2. Continuing costs or savings: None.

3. Additional factors increasing or decreasing costs: None.

(b) Reporting and paperwork requirements: Processing the certification forms will require a minimal amount of time.

(3) Assessment of anticipated effect on state and local revenues: None.

(4) Assessment of alternative methods; reasons why alternatives were rejected: The amendment is in response to changes in the federal regulation which govern the requirements for the state program and no alternatives are possible.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None.

Tiering:
Was tiering applied? No. Tiering is not applicable to these proposed amendments since these requirements must, pursuant to the federal and Kentucky surface mining laws and regulations, apply equally to all applicants for and permittees of underground mining activities under 405 KAR Chapters 7-24.
A fiscal note is not required for this regulation because it will have no impact on local government.

**NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET**
**Department for Surface Mining Reclamation and Enforcement**
**(Proposed Amendment)**

**405 KAR 18:190. Backfilling and grading.**

RELATES TO: KRS 350.020, 350.093, 350.100, 350.151, 350.405, 350.410, 360.450, 350.465
PURSUANT TO: KRS Chapter 13A, 350.028, 350.100, 350.151, 350.465
NECESSITY AND FUNCTION: KRS Chapter 350 in pertinent part requires the cabinet to promulgate rules and regulations establishing performance standards for protection of people and property, land, water and other natural resources, and aesthetic values, during underground mining activities and for restoration and reclamation of surface areas affected by underground mining activities. This regulation sets forth requirements for backfilling and grading of areas affected by surface operations, including requirements for backfilling and grading of face-up areas and other cut slopes and limited exemptions, timing of backfilling and grading, covering coal and acid and toxic materials, and regrading or stabilizing rills and gullies.

Section 1. Timing of Backfilling and Grading [General Requirements]. Surface areas disturbed incident to underground mining activities shall be backfilled and graded in accordance with a relative time-schedule approved by the cabinet in accordance with 405 KAR 18:020 [this regulation and a time schedule approved by the cabinet as a condition of the permit].

Section 2. General Backfilling and Grading Requirements. (1) [Method for backfilling and grading.
(a)] Except as provided in subsection (8) of this section [specifically exempted in Title 405, Chapters 16 through 20], all disturbed areas shall be returned to their approximate original contour. All spoil shall be transported, placed in a controlled manner, backfilled, compacted (where advisable to ensure stability or to prevent leaching of toxic materials), and graded to:
(a) Eliminate all highwalls (except as otherwise provided in Section 5 of this regulation), spoil piles, and depressions (excluding depressions and impoundments approved pursuant to subsection (4) or (5) of this section); [and to]
(b) Ensure a long-term static factor of safety of at least 1.3 for all portions of the reclaimed land;
(c) Achieve a postmining slope which does not exceed the angle of repose and which does prevent slides;
(d) [(b) Backfilled material shall be placed to] Minimize erosion and adverse effects on surface and ground water both on and off the site; [, minimize offsite effects,] and [to]
(e) Support the approved postmining land use.
[(2) Postmining final graded slopes need not be uniform but shall approximate the general nature of the premining topography. Except when necessary for sealing openings under 405 KAR 18:040, face-up areas and similar cut slopes need not be completely backfilled and graded as required by subsection (1) of this section if the cabinet determines that:]
[(a) No significant adverse environmental impacts will result; and]
[(b) Sufficient backfill material is not available without redisturbance of settled fills that have become stabilized and successfully revegetated.]
(2) Spoil, except excess spoil disposed of in accordance with 405 KAR 18:130, shall be returned to the excavated surface areas.
(3) Disposal of coal processing waste and underground development waste in the mined-out surface area shall be in accordance with 405 KAR 18:140, except that a long-term static safety factor of 1.3 shall be achieved.
(4) Small depressions may be constructed on backfilled areas, if the depressions:
(a) Are needed to minimize erosion, conserve soil moisture, create or enhance wildlife habitat, or promote vegetation;
(b) Do not restrict normal access;
(c) Are not inappropriate substitutes for lower grades on the reclaimed lands;
(d) Are approved by the cabinet;
(e) Do not adversely affect the stability of the backfilled area; and
(f) Are not located in steep-slope areas.
(5) Impoundments shall not be allowed on backfilled areas, unless the impoundments:
(a) Meet the applicable requirements of 405 KAR 18:060, Section 10 and 405 KAR 18:100;
(b) Are demonstrated, to the satisfaction of the cabinet in the permit application, to have no adverse effect on the stability of the backfilled area;
(c) Are consistent with and suitable for the approved postmining land use;
(d) Are specifically approved by the cabinet in the permit application; and
(e) Are not located in steep-slope areas.
(6) All underground mining activities on slopes above twenty (20) degrees, or on lesser slopes that the cabinet defines as steep slopes, shall comply with the requirements of 405 KAR 20:060.
(7) [(3)] All final grading; preparation of

overburden before replacement of topsoil, topsoil substitutes, and topsoil supplements; and placement of topsoil, topsoil substitutes, and topsoil supplements shall be done along the contour to minimize subsequent erosion and instability. If such grading, preparation, or placement along the contour is hazardous to equipment operators, then grading, preparation, or placement in a direction other than generally parallel to the contour may be used. In all cases, grading, preparation, and [or] placement shall be conducted in a manner which minimizes erosion and[, when appropriate,] provides a surface for [re]placement of topsoil, topsoil substitutes, and topsoil supplements which will minimize slippage.

(8) The postmining slope may vary from the approximate original contour when approval is obtained from the cabinet for:

(a) A variance from approximate original contour requirements in accordance with 405 KAR 8:050, Section 6;

(b) Incomplete elimination of highwalls in previously mined areas in accordance with Section 5 of this regulation; or

(c) Incomplete elimination of face-up areas and similar cut slopes which were created prior to May 3, 1978 in accordance with subsection (9) of this section.

(9) Any underground mining activity under permit as of the effective date of this amendment and having a face-up area or similar cut slope which was created prior to May 3, 1978 may comply with the backfilling and grading plan approved in the permit and shall not be required to completely eliminate the pre-existing face-up area or similar cut slope, if such elimination was not required in the approved permit.

Section 3. Disposal of Acid-forming, Toxic-forming, and Combustible Materials and Coverage of Coal Seams. [Covering Coal and Acid- and Toxic-forming Materials.] (1) General. Exposed coal seams, acid-forming materials, toxic-forming materials, and combustible materials which are used, produced, or exposed during surface coal mining and reclamation operations shall be handled; disposed of; treated; and covered with nontoxic-forming, nonacid-forming, and noncombustible materials in a manner which:

(a) Minimizes adverse impacts on surface and ground water, minimizes disturbances to the hydrologic balance, and prevents material damage to the hydrologic balance;

(b) Ensures compliance with 405 KAR 18:060;

(c) Prevents sustained combustion;

(d) Minimizes adverse impacts on plant growth and the approved postmining land use;

(e) Ensures that the affected area is capable of sustaining sufficient vegetation to meet the revegetation requirements of 405 KAR 18:200; and

(f) Ensures that the affected area is capable of meeting the postmining land use requirements of 405 KAR 18:220.

(2) [(1)] Coverage and treatment. All exposed coal seams, acid-forming materials, toxic-forming materials, and combustible materials which are used, produced, or exposed during surface coal mining and reclamation operations shall be covered and treated as necessary to neutralize toxicity, acidity, and combustibility, in order to ensure long-term and short-term compliance with subsection (1) of this section.

(a) All exposed coal seams shall be covered with a minimum of four (4) feet of nontoxic-forming, nonacid-forming, and noncombustible materials. The cabinet shall require thicker amounts of cover, special compaction of cover, treatment, or other measures as necessary to ensure compliance with subsection (1) of this section and to prevent exposure of the coal seams by erosion.

(b) Excluding exposed coal seams, all acid-forming materials, toxic-forming materials, and combustible materials which are used, produced, or exposed during surface coal mining and reclamation operations shall be:

1. Selectively blended with nontoxic-forming, nonacid-forming, and noncombustible materials; treated; or selectively handled, or an appropriate combination of such measures shall be used, as necessary to ensure compliance with subsection (1) of this section; and

2. Covered with a minimum of four (4) feet of nontoxic-forming, nonacid-forming, and noncombustible materials. The cabinet shall require thicker amounts of cover, special compaction of cover, treatment, or other measures as necessary to ensure compliance with subsection (1) of this section and to prevent exposure of the toxic-forming, acid-forming, or combustible materials by erosion. The cabinet may approve lesser amounts of cover, or no cover (other than topsoil, topsoil substitutes, or topsoil supplements), if the applicant demonstrates, to the satisfaction of the cabinet in the permit application, that the lesser amounts are sufficient to ensure compliance with subsection (1) of this section and to maintain coverage of the toxic-forming, acid-forming, and combustible materials;

3. If required or approved by the cabinet, compacted and placed in an environment which minimizes the oxidation potential of the toxic-forming materials, acid-forming materials, and combustible materials; and

4. If required or approved by the cabinet, disposed so as to minimize surface and ground water contact with acid-forming materials, toxic-forming materials, and combustible materials. Such contact shall be minimized by the encasement of such materials in low-permeability substances and by the compaction and selective placement of such materials in locations other than surface drainage courses, ground water recharge areas, or areas of significant ground water flow. As an alternative to minimizing contact with surface and ground water and if feasible based on site conditions, the cabinet may require that acid-forming materials, toxic-forming materials, and combustible materials be placed below the permanent water table.

(3) The cabinet shall specify measures in addition to those identified in subsection (2) of this section if necessary to ensure protection of the environment or the health or safety of the public.

[(a) A permittee shall either cover, with a minimum of four (4) feet of the best available non-toxic and noncombustible material, or treat all exposed coal seams remaining after mining and all acid-forming, toxic-forming, combustible, and other materials identified by the cabinet as exposed, used or produced during mining. Cover or treatment shall be provided so as to neutralize toxicity, acidity and combustibility, in order to prevent water

pollution and sustained combustion, and to minimize adverse effects on plant growth and land use.]

[(b) Where necessary to protect against upward migration of salts, exposure by erosion, to provide an adequate depth for plant growth, or to otherwise meet local conditions, the cabinet shall specify thicker amounts of cover using non-toxic material.]

[(c) Acid-forming or toxic-forming material shall not be buried or stored in proximity to a drainage course so as to cause or pose a threat of water pollution.]

[(2) Stabilization. Backfilled materials shall be selectively transported, placed in a controlled manner, and compacted, wherever necessary to prevent leaching of acid-forming and toxic-forming materials into surface or ground waters and wherever necessary to ensure the stability of backfilled materials. The method and design specifications of compacting material shall be approved by the cabinet before acid-forming and toxic-forming materials are covered.]

Section 4. Regrading or Stabilizing Rills and Gullies. When rills or gullies deeper than nine (9) inches form in areas that have been regraded and topsoiled, the rills and gullies shall be filled, graded, or otherwise stabilized and the area reseeded and [or] replanted according to 405 KAR 18:200. The cabinet may specify that rills or gullies of lesser size be stabilized and the area reseeded and [or] replanted, if the rills or gullies are disruptive to the approved postmining land use or to the establishment of vegetation, [or] may result in additional erosion and sedimentation, or may cause or contribute to the violation of a water quality standard.

Section 5. Remining Previously Mined Areas. (1) General requirements. Remining operations on previously mined areas, including steep slope areas, that contain a pre-existing highwall shall comply with Sections 1 through 4 of this regulation except as provided in this section.

(2) Definitions.

[(a) "Adverse physical impact" means, with respect to a highwall created or impacted by remining, conditions such as sloughing of material, subsidence, instability, or increased erosion of highwalls, which occur or can reasonably be expected to occur as a result of remining and which pose threats to property, public health, safety, or the environment.]

[(b) "Modified highwall" means either:]

[1. The highwall resulting from remining where the pre-existing highwall face is removed; or]

[2. The highwall resulting from remining where the pre-existing highwall is vertically enlarged.]

(a) [(c)] "Highwall remnant" means that portion of highwall that remains after backfilling and grading of a remining permit area.

(b) "Modified highwall" means either:

1. The highwall resulting from remining where the pre-existing highwall face is removed; or

2. The highwall resulting from remining where the pre-existing highwall is vertically enlarged.

(c) [(d)] "Previously mined area" means land which was disturbed or affected by coal mining operations that occurred prior to May 3, 1978, which was not reclaimed to the standards of this Title, and for which there is no continuing responsibility to reclaim to the standards of this Title. [disturbed or affected by earlier coal mining operations that was not reclaimed to the standards of this title, and there is no continuing responsibility to reclaim to such standards.]

(d) [(e)] "Reasonably available spoil" means spoil and suitable coal mine waste material generated by the remining operation and other spoil or suitable coal mine waste material located in the permit area that is accessible and available for use and that when rehandled will not cause a hazard to public safety or significant damage to the environment. For this purpose, the permit area shall include all such spoil in the immediate vicinity of the mining operation.

(e) [(f)] "Remining" means conducting surface coal mining and reclamation operations which affect previously mined areas.

[(3) Auger remining operations. The requirements within Section 2(1) of this regulation to completely eliminate the highwall shall not apply to auger remining operations where the volume of all reasonably available spoil is demonstrated in writing to the cabinet to be insufficient to completely backfill the pre-existing or modified highwall. The highwall shall be eliminated to the maximum extent technically practical in accordance with the following criteria:]

[(a) All reasonably available spoil shall be used to backfill the area, provided, however, that in all cases the coal seam mined shall be covered with a minimum of four (4) feet of noncombustible, non-acid, non-toxic forming material and all holes shall be sealed in accordance with 405 KAR 20:030.]

[(b) All spoil generated or handled by the remining operation shall be retained on the solid portion of existing or new benches.]

[(c) The backfill shall be graded to a slope which is compatible with the approved postmining land use and which provides adequate drainage and long-term stability.]

[(d) Any highwall remnant shall be made stable and not pose a hazard to public health and safety or to the environment. The permittee shall demonstrate to the satisfaction of the cabinet that the highwall remnant is stable.]

[(e) Spoil placed on the outslope during previous mining operations shall not be disturbed if such disturbance will cause instability of the remaining spoil or otherwise increase the hazard to the public health and safety or to the environment.]

(3) [(4)] Variances to backfilling and grading requirements for remining operations [other than augering.]

[(a)] The requirements within Section 2(1)(a) of this regulation to completely eliminate [the] highwalls shall [not] apply to remining operations, except for situations in which the volume of all reasonably available spoil is demonstrated, to the satisfaction of the cabinet in the permit application, to be insufficient to completely backfill and eliminate the pre-existing or modified highwall. The highwall shall be eliminated to the maximum extent technically practicable in accordance with the following criteria: [that are not reasonably expected to cause an adverse physical impact on the pre-existing or modified highwall. Such remining operations shall comply with the

following:]

(a) [1.] All reasonably available spoil [generated by the remining operation] shall be used to backfill [and grade] the area.

(b) The backfill shall be graded to a slope which is compatible with the approved postmining land use and which provides adequate drainage and long-term stability (1.3 long-term static factor of safety), provided, however, that the exposed coal seam [mined] shall be covered in accordance with Section 3 of this regulation [with a minimum of four (4) feet of noncombustible, non-acid, non-toxic forming material].

(c) [2.] Spoil generated or handled by the remining operation shall not be placed on the fill section of any existing or new bench. [All spoil generated or handled by the remining operation shall be retained on the solid portion of existing or new benches.]

(d) [3.] Any highwall remnant shall be stable and not pose a hazard to the public health and safety or to the environment. The permittee shall demonstrate, to the satisfaction of the cabinet in the permit application, that the postmining highwall remnant will be [is] stable. If the highwall remnant is determined by the cabinet to be unstable or potentially unstable, the permittee shall perform any corrective measures required by the cabinet to stabilize the highwall remnant. [If unexpected adverse physical impacts do occur, the permittee shall stabilize the highwall remnant.]

(e) [4.] Spoil placed on the outslope during previous mining operations shall not be disturbed if such disturbance will cause instability of the remaining spoil or otherwise increase the hazard to the public health or [and] safety or to the environment.

[(b) Where the remining operation is reasonably expected to cause an adverse physical impact on the pre-existing or modified highwall, the requirement of Section 2(1) of this regulation to completely eliminate the highwall shall apply except where the volume of all reasonably available spoil is demonstrated in writing to the cabinet to be insufficient to completely backfill the highwall. In such case, the highwall shall be eliminated to the maximum extent technically practical in accordance with the following criteria:]

[1. All reasonably available spoil shall be used to backfill the area, provided, however, that the coal seam mined shall be covered with a minimum of four (4) feet of noncombustible, non-acid, non-toxic forming material.]

[2. All spoil generated or handled by the remining operation shall be retained on the solid portion of existing or new benches.]

[3. The backfill shall be graded to a slope which is compatible with the approved postmining land use and which provides adequate drainage and long-term stability.]

[4. Any highwall remnant shall be made stable and not pose a hazard to public health and safety or to the environment. The permittee shall demonstrate to the satisfaction of the cabinet that the highwall remnant is stable.]

[5. Spoil placed on the outslope during previous mining operations shall not be disturbed if such disturbance will cause instability of the remaining spoil or otherwise increase the hazard to the public health and safety or to the environment.]

Section 6. Temporary Storage of Materials. (1) After excavation, materials to be used for backfilling in compliance with this regulation shall be returned, for backfilling purposes in accordance with this regulation, to a mined-out area within the permit area or shall be temporarily stored in designated storage areas designs of which have been provided in the permit application and thereby approved by the cabinet.

(2) Temporary storage areas shall be designed and constructed in accordance with the requirements of 405 KAR 18:130 or 405 KAR 18:140, depending on the type of material, except as specified in the following:

(a) If the temporary storage area is to exist for six (6) months or longer, the storage area shall be protected by establishment of an effective cover of nonnoxious, quick-growing, annual and perennial plants seeded or planted during the first normal seeding or planting period following placement of the fill material and re-sown as necessary thereafter.

(b) Topsoil, topsoil substitute, and topsoil supplmement materials to be used in final reclamation of the temporary storage area shall either be stockpiled in accordance with 405 KAR 18:050, Section 3(1) through (3) or temporarily redistributed on areas in accordance with 405 KAR 18:050, Section 3(4). The applicant shall submit, in the permit application, a discussion from a qualified soil scientist or qualified agronomist which indicates, to the satisfaction of the cabinet, that the topsoil stockpile or temporary redistribution plan will minimize adverse effects on the quality and quantity of the topsoil, topsoil substitute, and topsoil supplement materials.

(3) Fills designed and constructed in accordance with this section may be retained as permanent structures if:

(a) The cabinet approves a permit revision submitted in accordance with 405 KAR 8:010, Section 20 for retention of the fill as a permanent structure and for the use of alternate materials to backfill areas and return the disturbed areas to their approximate original contour, in accordance with the requirements of this regulation;

(b) Topsoil, topsoil substitute, and topsoil supplement materials are redistributed on the fill in accordance with 405 KAR 18:050;

(c) The fill is revegetated and reclaimed in accordance with 405 KAR 18:200, 405 KAR 18:220, and all other applicable requirements of KRS Chapter 350 and this Title; and

(d) The borrow area or other area from which the alternate backfill material is obtained is permitted under a valid permit from DSMRE and is reclaimed in accordance with the requirements of KRS Chapter 350 and this Title.

CHARLOTTE E. BALDWIN, Secretary

APPROVED BY AGENCY: November 14, 1985

FILED WITH LRC: November 15, 1985 at 11 a.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 30, 1985, at 10 a.m. in Room G-1 of the Capital Plaza Tower. Written comments may be submitted on or before the scheduled hearing date. However, if no written notice of intent to attend and testify at the public hearing is received within five (5) days before the scheduled hearing, the hearing will be cancelled. Those interested in attending and

testifying at this hearing shall notify in writing: George Risk, Department for Surface Mining Reclamation and Enforcement, 3rd Floor Capital Plaza Tower, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: George Risk

(1) Type and number of entities affected: This regulation sets forth requirements for backfilling and grading for underground mining activities which are conducted under Kentucky's permanent regulatory program for coal mining. In that regard, this regulation affects all persons who hold permanent-program permits to conduct underground mining activities (excluding those affecting areas which are two acres or less in size) under KAR Title 405. (Approximately 2,400 coal mining operations (exluding two-acre operations) have been permitted under Kentucky's permanent regulatory program for coal mining, and approximately one-half of these include underground mining activities.)

By affecting those persons identified above, this regulation also affects, directly or indirectly and in varying degrees, persons living in, or with interests in, the coal field regions of Kentucky as well as other persons with interests in coal mining.

The amendments to this regulation will affect underground mining activities in varying degrees. The extent to which such activities are affected is dependent on the site conditions and specific backfilling and grading plans for each operation. For example, the amendments to this regulation will affect underground mining activities which involve remining operations by requiring that all such activities use all reasonably available spoil to eliminate as much of the premining or modified highwall as is practicable; thus, the amendments will disallow the variance from this requirement for operations which are not expected to have an adverse physical impact on the highwall. It should be noted that relatively few of the underground mining activities permitted under the permanent program include remining operations; therefore, the revised remining requirements should affect relatively few permanent-program operations.

It should be noted that the amendments also eliminate a provision which currently allows for the incomplete elimination of highwalls if insufficient backfill material is available without the redisturbance of settled fills. However, the cabinet has retained a provision which will allow the incomplete elimination of face-up areas and similar cut slopes which were created prior to May 3, 1978. The cabinet anticipates that the elimination of this provision will affect less than 1/3 of the underground operations permitted under the permanent program.

(a) Direct and indirect costs or savings to those affected:

1. First year: The amendments as proposed will have a variety of economic effects on those persons identified above. These effects will be related to the site conditions and the specific plans for a particular operation. Some operations will not be affected by the amendments, other operations will incur additional costs as a result of the amendments, and still other operations will be saved expenses due to the amendments.

2. Continuing costs or savings: See section (1)(a)1.

3. Additional factors increasing or decreasing costs (note any effects upon competition): None.

(b) Reporting and paperwork requirements: Some permits will need to be revised or amended as a result of these amendments. This will result in additional paperwork and reporting for some, but not all, of the persons identified in section (1).

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: Additional expenses will be incurred by the cabinet as a result of the amendments. These expenses will largely be associated with the processing of the permit revisions and amendment which are discussed in section (1)(b).

2. Continuing costs or savings: See section (2)(a)1.

3. Additional factors increasing or decreasing costs: None.

(b) Reporting and paperwork requirements: Additional paperwork requirements will be imposed on the cabinet as a result of the amendments. These requirements will largely be associated with the processing of the permit revisions and amendments which are discussed in section (1)(b).

(3) Assessment of anticipated effect on state and local revenues: None.

(4) Assessment of alternative methods; reasons why alternatives were rejected: None.

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None.

(a) Necessity of proposed regulation if in conflict: N/A

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A

(6) Any additional information or comments: None.

Tiering:
Was tiering applied? No. Tiering is not applicable to these proposed amendments since these requirements must, pursuant to the federal and Kentucky surface mining laws and regulations, apply equally to all underground mining activities conducted under 405 KAR Chapters 7-24.

A fiscal note is not required for this regulation because it will have no impact on local government.

**NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET**
**Department for Surface Mining Reclamation and Enforcement**
**(Proposed Amendment)**

**405 KAR 20:040. Prime farmland.**

RELATES TO: KRS 350.100, 350.405, 350.415, 350.450, 350.465

PURSUANT TO: KRS Chapter 13A, 350.028, 350.100, 350.450, 350.465

NECESSITY AND FUNCTION: KRS Chapter 350 in pertinent part requires the cabinet to promulgate environmental protection performance standards specifically including special requirements for the protection of prime

farmland. This regulation specifies special requirements for the removal, stockpiling, replacement, and revegetation of prime farmland.

Section 1. Applicability. The requirements of this regulation shall apply to prime farmland affected by surface coal mining and reclamation operations except that which has been excluded in accordance with 405 KAR 8:050, Section 3(1).

Section 2. Soil Removal. (1) The approximate boundaries of each prime farmland soil mapping unit shall be marked with flags or other suitable markers at the time of submission of the preliminary application and shall remain marked to aid soil removal operations. Where the cabinet has approved combining of subsoils from different soil mapping units in the reclamation plan, then only the combined areas need be marked.

(2) Soil removal shall be conducted within driest periods of the year as approved by the cabinet in the reclamation plan and shall be conducted within soil moisture ranges that will minimize compaction.

(3) Soil removal shall be conducted with equipment that minimizes compaction and allows effective segregation of soil layers.

(4) Soils shall be removed from the areas to be disturbed before drilling, blasting, or mining.

(5)(a) The topsoil shall be removed as a separate layer and, if not utilized immediately, placed in stockpiles separate from non-prime farmland topsoil, other soil horizons, spoil, and all other excavated materials. Topsoil from all prime farmland soils in the permit area can be aggregated when removed, stockpiled, and reconstructed.

(b) If the topsoil is less than six (6) inches in depth, a six (6) inch layer that includes the topsoil and a portion of the B horizon shall be removed as a separate layer.

(6)(a) Subsoil materials shall be removed to a sufficient depth to have enough material (considering compaction and losses during handling) to reconstruct forty-eight (48) inches in depth of soil, including topsoil and subsoils. The cabinet may require a greater depth if determined to be necessary to restore the original soil productive capacity.

(b) The forty-eight (48) inch depth requirement shall be reduced to the depth in the natural soil of a:

1. Bedrock horizon, or

2. Fragipan horizon which has been demonstrated, to the satisfaction of the cabinet in the permit application, to contribute little or nothing to the productive capacity of the soil. This contribution must be less than 0.06 inches per inch of available water capacity to qualify for such exclusions.

(c) Where the minimum depth requirement has been reduced under paragraph (b) of this subsection due to the existence of a fragipan horizon, the cabinet may approve removal of the fragipan and/or other horizons in order to increase the depth of reconstructed soil and if mixing these materials with the overlying horizons would improve the productive capacity of the reconstructed soil as compared to compliance with minimum depth requirements.

(d) Bedrock horizons and fragipan horizons are designated in soil profiles by horizon symbols containing the letters "R" and "x" respectively.

(e) Where a permit issued prior to the effective date of this amendment to this regulation allowed a fragipan to be considered as a root inhibiting horizon, the permittee shall be allowed to continue to treat such a fragipan as a root inhibiting horizon for all prime farmland soils removed prior to ninety (90) days after the effective date of these amendments. For such permits, soil removal operations on and after ninety (90) days from the effective date of these amendments shall comply with paragraph (b)2 of this subsection and the permit shall be revised as necessary.

(7)(a) The B and C horizons in combination (or portion thereof necessary to meet the requirements of subsection (6) of this section) shall be removed as a separate layer and, if not utilized immediately, placed in stockpiles separate from topsoils, other soil horizons, spoil and all other excavated materials. Except as provided in subsection (8) of this section, B and C horizon material from different prime farmland soil mapping units shall be separately removed, stockpiled, and reconstructed.

(b) The cabinet, in consultation with the SCS, may require separation of the B and C horizons during removal, stockpiling, and reconstruction when the B and C horizons have constrasting properties and, in the judgment of the cabinet, mixing of the B and C horizons would likely reduce the productive capacity of the reconstucted soil.

(8) The cabinet, in consultation with the SCS, may approve combining of subsoil horizons from different prime farmland soil mapping units within the permit area based upon the degree of contrast in soil properties such as texture and pH and the degree of difference in crop yields from the different unmined soil mapping units. Where a permit issued prior to the effective date of this amendment to this regulation allowed such combining of subsoils, no permit revison shall be required and the permittee may continue to combine subsoils.

(9) The cabinet, in consultation with the SCS, may approve topsoil or subsoil substitutes or supplements where use of such will create a final soil having a greater productive capacity than that which exists prior to mining. This approval shall be based upon a demonstration by the applicant as required in 405 KAR 8:050, Section 3(2)(b)6. The approved substitute or supplement shall be separately removed, stockpiled, and replaced in the same manner as required for original soil horizons.

Section 3. Stockpiling. (1) Stockpile sites shall be located in the permit area on areas that are not subject to flooding or slippage and where the stockpiles will not be disturbed or subject to excessive erosion or contamination. Prime farmland soil areas shall be avoided as stockpile sites where feasible.

(2) Stockpile areas shall be prepared by removing all woody vegetation that may interfere with placement or removal or stockpiled soil. The topsoil shall be removed from the area except where the site is prime farmland and is to be used to store prime farmland topsoil.

(3) If stockpiles are left in place for more than thirty (30) days, the stockpile shall be protected from erosion and ponding of water by appropriate drainage and erosion control measures, approved by the cabinet, such as are contained in guidelines published in the Soil

Conservation Service Technical Guide. A vegetative cover shall be established in accordance with 405 KAR 16:050, Section 3(2).

(4) Where stockpiles are located on prime farmland soils, after removal of the stockpile the underlying soil horizons shall be ripped and chiseled during dry conditions to reduce compaction.

Section 4. Soil Replacement and Reconstruction. (1) Prior to replacement of soil materials, the backfilled spoil shall be graded to uniform slopes so that, after the soil horizons have been replaced, the requirements of subsection (10) of this section can be met with minimal regrading of the soil material.

(2) Each soil mapping unit shall be separately reconstructed except as provided in Section 2(8) of this regulation. Soils may be reconstructed in other than the original location as approved in the permit provided that the ownership of the prime farmland soil is not changed.

(3) Soil replacement shall be conducted with equipment and replacement techniques that will minimize compaction. Equipment operation patterns shall be designed to minimize traffic on soil material.

(4) Replacement and ripping and chiseling shall be conducted within soil moisture ranges that will minimize compaction.

(5) After grading the backfilled spoil, the subsoil horizons or substitute materials removed under Section 2 shall be replaced. All traffic areas shall be ripped or chiseled prior to replacement of the next layer of material, unless deep-ripping methods approved by the cabinet will achieve equivalent results. Where the B and C horizons have been separated during removal under Section 2, then the C horizon shall be separately replaced prior to replacement of the B horizon.

(6) After replacing the subsoil horizons or substitute materials, the topsoil horizon or substitute material removed under Section 2 shall be replaced. All traffic areas shall be ripped or chiseled.

(7) The minimum depth of reconstructed soil shall be forty-eight (48) inches, or a lesser or greater depth as specifically approved or required in the permit in accordance with Section 2(6) of this regulation. The reconstructed topsoil horizon (or substitute material) shall equal or exceed the thickness of the original topsoil horizon. Soil horizons shall be reconstructed to uniform depths.

(8) Texture and pH of the reconstructed soil horizons shall be as favorable for plant growth or better than comparable horizons of the unmined soil considering mixtures of horizons or approved substitute soil materials or supplements.

(9) Bulk density.

(a) Except as provided in paragraph (b) of this subsection, each permittee shall comply with either subparagraph 1 or 2 of this paragraph.

1. The average bulk density of each ten (10) inch layer of reconstructed soil shall not exceed 1.65 g/cc. However, Phase I bond release may be granted where density exceeds the requirements of this subparagraph upon demonstrating that soil productivity has been restored under Section 5 of this regulation.

2. Porosity and density of the reconstructed soil shall permit penetration of roots of the crops commonly produced on the surrounding prime farmland comparable to the penetration on nonmined prime farmland. This shall be demonstrated by growing deep-rooted crops approved by the cabinet in order to directly observe root penetration by digging observation pits. Factors to be considered shall include, but not necessarily be limited to, evaluation of the presence or absence of:

a. Very firm, massive soil physical conditions in any layer above the required rooting-medium depth that has half or more of the soil volume in masses ten (10) inches or more in diameter that are not effectively exploited by the root systems;

b. Roots restricted to a depth less than the required rooting-medium depth;

c. Confinement of roots to mats in desiccation cracks; and

d. Flattened roots.

(b) The provisions of paragraph (a) of this subsection shall only apply to prime farmland areas where soil removal occurs on or after the effective date of this amendment.

(10) Final grading of the reconstructed soil shall provide uniform slopes and adequate surface drainage so that ponding does not occur after settling. The average slope shall be within the slope range of the unmined prime farmland map units and shall not exceed six (6) percent nor be less than one (1) percent. Appropriate erosion control measures shall be implemented as approved in the reclamation plan such as are contained in guidelines published in the Soil Conservation Service Technical Guide.

(11) Each reconstructed prime farmland soil mapping unit boundary shall be permanently marked in the field until final bond release. Where the cabinet has approved combining of subsoils from different soil mapping units in the reclamation plan, then only the combined areas need be marked.

(12) Phase I bond release shall not be granted until it is demonstrated to the cabinet's satisfaction that the requirements of this section have been met.

Section 5. Revegetation and Restoration of Soil Productivity. (1) Requirements for revegetation and demonstration of successful restoration of soil productivity are set forth in "Kentucky Prime Farmland Revegetation and Crop Production Restoration After Mining," Kentucky Department for Surface Mining Reclamation and Enforcement in consultation with the U.S. Soil Conservation Service, June 1985. This document is incorporated herein by reference. Copies may be obtained from the department.

(2) Data on crop yields from restored prime farmland soils shall be verified by the cabinet. The permittee shall notify the appropriate regional office of the department of harvest dates in order to provide the opportunity for cabinet personnel to monitor yield measurements. This notification shall be in writing at least thirty (30) days prior to anticipated harvest dates and shall be followed up by telephone prior to actual harvest dates.

(3) Irrespective of the provisions of 405 KAR 1:005, this section shall also apply to prime farmland mined under the interim regulatory program under 405 KAR 1:250.

[Section 1. Special Requirements. Surface coal

mining and reclamation operations conducted on prime farmland shall meet the following requirements:]

[(1) A permit shall be obtained for those operations under 405 KAR 8:050, Section 3.]

[(2) Soil materials to be used in the reconstruction of the prime farmland soil shall be removed before drilling, blasting, or mining, in accordance with Section 2 of this regulation and in a manner that prevents mixing or contaminating these materials with undesirable material. Where removal of soil materials results in erosion that may cause air and water pollution, the cabinet shall specify methods to control erosion of exposed overburden.]

[(3) Soil productivity shall be restored to support equivalent or higher levels of yield as nonmined prime farmland of the same soil type in the surrounding area under equivalent levels of management. Successful restoration of soil productivity shall be demonstrated by either:]

[(a) A soil survey; or]

[(b) A comparison of actual average annual crop production on the restored area for the three (3) years prior to bond release, with the actual average annual production of similar crops in the same time period on nonmined prime farmland of the same soil type in the surrounding area under equivalent levels of management. The comparison may include appropriate adjustments for weather induced variability in the average annual crop production.]

[Section 2. Soil Removal. (1) Surface coal mining and reclamation operations on prime farmland shall be conducted to:]

[(a) Separately remove the entire A horizon or other suitable soil materials which will create a final soil having an equal or greater productive capacity than that which existed prior to mining.]

[(b) Separately remove the B horizon of the soil, a combination of B horizon and underlying C horizon, or other suitable soil material that will create a reconstructed soil of equal or greater productive capacity than that which existed before mining.]

[(c) Separately remove the underlying C horizons, other strata, or a combination of horizons or other strata, to be used instead of the B horizon. When replaced, these combinations shall be equal to, or more favorable for plant growth than, the B horizon.]

[(2) The minimum depth of soil and soil material to be removed for use in reconstruction of prime farmland soils shall be sufficient to meet the soil replacement requirements of Section 4(1) of this regulation.]

[Section 3. Soil Stockpiling. If not utilized immediately, the A horizon or other suitable soil materials specified in Section 2(1)(a) of this regulation and the B horizon or other suitable soil materials specified in Section 2(1)(b) and (c) of this regulation shall be stored separately from each other and from spoil. These stockpiles shall be placed within the permit area where they are not disturbed or exposed to excessive water or wind erosion before the stockpiled horizons can be redistributed. Stockpiles in place for more than thirty (30) days shall meet the requirements of 405 KAR 16:050, Section 3 or 405 KAR 18:050, Section 3.]

[Section 4. Soil Replacement. Surface coal mining and reclamation operations on prime farmland shall be conducted according to the following:]

[(1) The minimum depth of soil and soil material to be reconstructed for prime farmland shall be forty-eight (48) inches, or a depth equal to the depth of a subsurface horizon in the natural soil that inhibits root penetration, whichever is shallower. The cabinet shall specify a depth greater than forty-eight (48) inches, wherever necessary to restore productive capacity due to uniquely favorable soil horizons at greater depths. Soil horizons shall be considered as inhibiting root penetration if their densities, chemical properties, or water supplying capacities restrict or prevent penetration by roots of plants common to the vicinity of the permit area and have little or no beneficial effect on soil productive capacity.]

[(2) Replace soil material only on land which has been first returned to final grade and scarified according to 405 KAR 16:190, Sections 1 through 5 or 405 KAR 18:190, Sections 1 through 3, unless site-specific evidence is provided and approved by the cabinet showing that scarification will not enhance the capability of the reconstructed soil to achieve equivalent or higher levels of yield.]

[(3) Replace the soil horizons or other suitable soil material in a manner that avoids excessive compaction.]

[(4) Replace the B horizon or other suitable material specified in Section 2(1)(b) and (c) of this regulation to the thickness needed to meet the requirements of subsection (1) of this section.]

[(5) Replace the A horizon or other suitable soil materials specified in Section 2(1)(a) of this regulation as the final surface soil layer. This surface soil layer shall equal or exceed the thickness of the original soil, as determined in 405 KAR 8:050, Section 3(2)(a), and be replaced in a manner that protects the surface layer from wind and water erosion before it is seeded or planted.]

[(6) Apply nutrients and soil amendments as needed to quickly establish vegetative growth.]

[Section 5. Revegetation. Each permittee who conducts surface coal mining and reclamation operations on prime farmland shall meet the revegetation requirements of this section during reclamation. Following soil replacement, the permittee shall establish a vegetative cover capable of stabilizing the soil surface with respect to erosion. All vegetation shall be in compliance with the plan approved by the cabinet under 405 KAR 8:050, Section 3, and carried out in a manner that encourages prompt vegetative cover and recovery of productive capacity. The timing and mulching provisions of 405 KAR 16:200, Sections 3 and 4, or 405 KAR 18:200, Sections 3 and 4 shall be met.]

[Section 6. Exemption. The cabinet shall exempt from the requirements of this regulation those surface facilities at underground mines which are actively used over extended periods of time and are determined by the cabinet to affect a minimal amount of land.]

CHARLOTTE E. BALDWIN, Secretary
APPROVED BY AGENCY: November 14, 1985

FILED WITH LRC: November 15, 1985 at 11 a.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 30, 1985, at 10 a.m. in Room G-1 of the Capital Plaza Tower. Written comments may be submitted on or before the scheduled hearing date. However, if no written notice of intent to attend and testify at the public hearing is received within five (5) days before the scheduled hearing, the hearing will be cancelled. Those interested in attending and testifying at this hearing shall notify in writing: George Risk, Department for Surface Mining Reclamation and Enforcement, 3rd Floor Capital Plaza Tower, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: George Risk

(1) Type and number of entities affected: The amendments to this regulation affect those surface coal mining operations that conduct surface mining and related operations on prime farmland areas. There are approximately 190 such operations currently permitted under 405 KAR Chapters 7 through 24. These amendments will also directly affect the current and future surface owners of such land in relation to the future agricultural productivity of the reclaimed prime farmland soils.

(a) Direct and indirect costs or savings to those affected:

1. First year: This regulation provides more specific requirements for soil removal, stockpiling, and reconstruction; phase I bond releases; and demonstrations of crop yield restoration. However, the ultimate performance goal is unchanged. Although there may be some additional costs incurred by following these new soil handling and bond release requirements, these will be balanced by the increased probability of successful restoration of the prime farmland productivity because, if the coal operator should fail to meet the crop yield productivity standards, the costs of remedial measures or even bond forfeiture could be tremendous. There are additional costs due to the fact that operators will now have to grow crops to prove successful reclamation, rather than merely submitting soil surveys. However, the soil survey option is no longer allowed due to the federal regulations.

There will be a potential savings to the surface owner due to the higher probability that the land will be productive after mining.

2. Continuing costs or savings: Same as first year.

3. Additional factors increasing or decreasing costs (note any effects upon competition): As with the current regulation, it will be more expensive to mine and reclaim prime farmland areas as compared to other mining operations. Thus, it may be more difficult for operations mining on prime farmland to compete with other mining operations.

(b) Reporting and paperwork requirements: There will be additional costs incurred to gather data demonstrating that the soil reconstruction standards and crop yield productivity standards have been met.

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: There will be some additional costs to the cabinet in equipment and man-power to enforce the regulation, especially in monitoring the harvest of crops.

2. Continuing costs or savings: Same as first year.

3. Additional factors increasing or decreasing costs: None

(b) Reporting and paperwork requirements: None

(3) Assessment of anticipated effect on state and local revenues: None

(4) Assessment of alternative methods; reasons why alternatives were rejected: None

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None

(a) Necessity of proposed regulation if in conflict: N/A

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A

(6) Any additional information or comments: None

Tiering:

Was tiering applied? No. Tiering was not applied because, under federal law and KRS Chapter 350, these provisions must apply equally to all surface coal mining operations on prime farmland.

A fiscal note is not required for this regulation because it will have no impact on local government.

**NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET**
**Department for Surface Mining Reclamation and Enforcement**
**(Proposed Amendment)**

**405 KAR 20:070. Offsite coal processing plants [and support facilities].**

RELATES TO: KRS 350.010, 350.151, 350.465

PURSUANT TO: KRS Chapter 13A, 350.028, 350.151, 350.465

NECESSITY AND FUNCTION: KRS Chapter 350 in pertinent part requires the cabinet to promulgate environmental protection performance standards for all surface coal mining and reclamation operations. This regulation sets forth certain performance standards for offsite coal processing plants [and support facilities].

Section 1. Applicability. This regulation establishes performance standards for coal processing plants that are not located within the permit area for a specific mine. This regulation shall not apply to coal processing plants which are located at the site of ultimate coal use.

Section 2. Performance Standards. Construction, operation, maintenance, modification, reclamation, and removal activities at coal processing plants shall comply with the provisions of 405 KAR Chapter 16 and 405 KAR 20:040, except as provided in this section and Section 5 of this regulation.

(1) Those provisions of 405 KAR 16:060 related to stream buffer zones shall not apply except that the findings required for approval of a stream buffer zone variance shall apply to any proposal to divert an intermittent or perennial stream.

(2) 405 KAR 16:010, Section 2, coal recovery, shall not apply.

(3) 405 KAR 16:010, Section 4, slide and erosion barriers, and Section 5, slides, shall not apply.

(4) 405 KAR 18:020 shall apply in lieu of 405 KAR 16:020.

(5) 405 KAR 16:040, casing and sealing of drilled holes, shall not apply.

(6) 405 KAR 16:120, use of explosives, shall not apply.

(7) 405 KAR 16:190, Section 5, thick overburden, shall not apply.

(8) 405 KAR 16:250, Section 2(2), minimize damage, destruction or disruption of utility services, shall not apply.

(9) 405 KAR 20:060, steep slopes, shall not apply.

Section 3. Nearby Underground Mining Activities. Adverse effects upon, or resulting from, nearby underground mining activities shall be minimized by appropriate measures, including but not limited to, compliance with 405 KAR 16:010, Section 3.

Section 4. Water Supply Replacement. Any permittee shall replace the water supply of an owner of interest in real property who obtains all or part of his or her supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source, when the water supply has been adversely impacted by contamination, diminution, or interruption proximately resulting from the coal processing plant activities.

Section 5. Previously Exempted Operations. Those coal processing plants in existence on the date specified in Section 6 of this regulation which were previously exempted from the requirements of 405 KAR Chapters 7 through 24 by the provisions of KRS 350.060(22) and which become subject to the provisions of this regulation upon the date specified in Section 6 of this regulation, shall comply with all provisions of Sections 1 through 4 of this regulation, except as provided in this section.

(1) 405 KAR 16:010, Section 3, shall not apply to areas disturbed prior to the date specified in Section 6 of this regulation.

(2) For surface areas that are without suitable topsoil, 405 KR 16:050, Section 1(3) shall apply.

(3) The requirements of 405 KAR 16:070, Section 1(1)(a) shall not apply until final action on the permit application by the cabinet and the sedimentation pond or other treatment facility design has been approved by the cabinet or the exemption provided by 405 KAR 16:070, Section 1(1)(c) has been granted. The cabinet, as a condition of the permit, may approve a reasonable time to construct or modify water treatment facilities.

(4) Any coal processing plant in existence on May 3, 1978, may comply with the backfilling and grading requirements of 405 KAR 16:190, Section 7.

(5) 405 KAR 20:040, prime farmland, shall not apply to any prime farmland disturbed prior to the date specified in Section 6 of this regulation.

(6) The ground water monitoring requirements of 405 KAR 16:110 shall not apply until final action on the permit application by the cabinet and the ground water monitoring plan is approved.

Section 6. Applicability of Amendments to this Regulation. These amendments shall become applicable upon the effective date of the federal rulemaking setting aside KRS 350.060(22), but not before December 1, 1985.

[Section 1. Applicability. Each person who conducts surface coal mining and reclamation operations, which includes the operation of a coal processing plant or support facility which is not located within the permit area for a specific mine, shall obtain a permit in accordance with 405 KAR 8:050 to conduct those operations and comply with Section 2.]

[Section 2. Performance Standards. Construction, operation, maintenance, modification, reclamation, and removal activities at operations covered by this regulation shall comply with the following:]

[(1) Signs and markers for the coal processing plant, coal processing waste disposal area, and water treatment facilities shall comply with 405 KAR 18:030.]

[(2) Roads, transport, and associated structures shall be constructed, maintained, and reclaimed in accordance with 405 KAR 18:230 and 405 KAR 18:260.]

[(3) Any stream or channel realignment shall comply with 405 KAR 18:080, Section 2.]

[(4) If required by the cabinet, any disturbed area related to the coal processing plant or associated facilities shall have sediment control structures, in compliance with 405 KAR 18:060, Section 2 and 405 KAR 18:090, and all discharges from these areas shall meet the requirements of 405 KAR 18:060, Section 1 and 405 KAR 18:070 and any other applicable state or federal law.]

[(5) Permanent impoundments associated with coal processing plants shall meet the requirements of 405 KAR 18:100 and 405 KAR 18:060, Section 8. Dams constructed of or impounding coal processing waste shall comply with 405 KAR 18:160.]

[(6) Use of water wells shall comply with 405 KAR 18:060, Section 6.]

[(7) Disposal of coal processing waste, solid waste, and any excavated materials shall comply with 405 KAR 18:140, 405 KAR 18:150 and 405 KAR 18:130.]

[(8) Discharge structures for diversions and sediment control structures shall comply with 405 KAR 18:060, Section 3.]

[(9) Air pollution control measures associated with fugitive dust emissions shall comply with 405 KAR 18:170.]

[(10) Fish, wildlife and related environmental values shall be protected in accordance with 405 KAR 18:180.]

[(11) Slide areas and other surface areas shall comply with 405 KAR 18:010, Section 3.]

[(12) Adverse effects upon or resulting from nearby underground coal mining activities shall be minimized by appropriate measures including, but not limited to, compliance with 405 KAR 18:060, Section 8.]

[(13) Reclamation shall include proper topsoil handling procedures, revegetation, and abandonment, in accordance with 405 KAR 18:060, Section 9, 405 KAR 18:190, 405 KAR 18:200, 405 KAR 18:220, and 405 KAR 18:010, Sections 4 and 5.]

[(14) Conveyors, buildings, storage bins or stockpiles, water treatment facilities, water

storage facilities, and any structure or system related to the coal processing plant shall comply with Title 405, Chapter 18.]

[(15) Any coal processing plant or associated structures located on prime farmland shall meet the requirements of 405 KAR 20:040.]

[(16) Any permittee shall replace the water supply of an owner of interest in real property who obtains all or part of his or her supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source, where the water supply has been affected by contamination, diminution, or interruption proximately resulting from the operation of the coal processing plant or support facility.]

CHARLOTTE E. BALDWIN, Secretary
APPROVED BY AGENCY: November 14, 1985
FILED WITH LRC: November 15, 1985 at 11 a.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 30, 1985, at 10 a.m. in Room G-1 of the Capital Plaza Tower. Written comments may be submitted on or before the scheduled hearing date. However, if no written notice of intent to attend and testify at the public hearing is received within five (5) days before the scheduled hearing, the hearing will be cancelled. Those interested in attending and testifying at this hearing shall notify in writing: George Risk, Department for Surface Mining Reclamation and Enforcement, 3rd Floor Capital Plaza Tower, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: George Risk

(1) Type and number of entities affected: This regulation establishes performance standards for coal processing plants which are not located within the permit area for a specific mine and which are not located at the site of ultimate coal use. In that regard, this regulation affects an estimated 250 coal processing operations which have been permitted under Kentucky's permanent program for coal mining.

By affecting those persons identified above, this regulation also affects, directly or indirectly and in varying degrees, persons living in, or with interests in, the coal field regions of Kentucky as well as persons with interests in coal mining.

More specifically, the amendments proposed by this rulemaking affect an estimated 600 to 800 coal processing operations (such as crushing facilities) which do not separate coal from impurities and which were previously exempt from the provisions of SMCRA, KRS Chapter 350, and KAR Title 405. These amendments establish performance standards which are to be applied to these previously exempt operations.

These amendments will have minimal impacts on the estimated 250 coal processing operations which are already permitted under Kentucky's permanent regulatory program.

(a) Direct and indirect costs or savings to those affected:

1. First year: As noted above, the amendments proposed in this rulemaking establish performance standards applicable to all offsite coal processing plants (excluding those at the site of ultimate coal use) but primarily affect those operations which were previously exempt from compliance with Kentucky's permanent regulatory program for coal mining. For such previously exempt operations which are existing as of the date of applicability of the amendments (an estimated 600 to 800 such operations are currently existing), the cabinet has tailored the amendments to allow for variances and exemptions from certain performance standards to account for the distinct difference between existing and proposed operations. However, those operations which are being brought under the jurisdiction of Kentucky's permanent program with this rulemaking will incur additional expenses in complying with the applicable performance standards.

2. Continuing costs or savings: Same as first year.

3. Additional factors increasing or decreasing costs (note any effects upon competition): None.

(b) Reporting and paperwork requirements: Paperwork and reporting requirements will be imposed on all persons conducting coal processing operations under these amendments. These requirements will be similar to those imposed on other coal operations.

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: The cabinet will incur additional expenses in the regulation of those operations which were previously exempt from compliance with Kentucky's permanent regulatory program for coal mining.

2. Continuing costs or savings: Same as first year.

3. Additional factors increasing or decreasing costs: None.

(b) Reporting and paperwork requirements: The cabinet's reporting and paperwork requirements will increase due to the regulation of those operations which were previously exempt from compliance with Kentucky's permanent regulatory program for coal mining. These increases will largely be associated with the processing of permit applications and the inspection of the previously exempt operations.

(3) Assessment of anticipated effect on state and local revenues: None.

(4) Assessment of alternative methods; reasons why alternatives were rejected: None.

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: KRS 350.060(22) is currently in conflict with the amendments proposed to 405 KAR 20:070 to the extent that they require the regulation of coal processing plants which do not separate coal from impurities. However, the federal Office of Surface Mining (OSM) has proposed to preempt and supersede this subsection (see 50 FR 37699) pursuant to Section 505(b) of SMCRA and 30 CFR 730.11(a). It is anticipated that this preemption and supersession will, in effect, require the cabinet to apply the permanent-program requirements as is indicated in the proposed amendments to 405 KAR 20:070. As is stated in these proposed amendments, the cabinet will not apply the amendments to 405 KAR 20:070 until OSM preempts and supersedes KRS 350.060(22), and, at that time, the amendments to 405 KAR 20:070 will be consistent with KRS Chapter 350 as well as other statutes and regulations.

(a) Necessity of proposed regulation if in conflict: The amendments to 405 KAR 20:070 are

necessary to maintain consistency between the federal laws and regulations for coal processing plants and Kentucky's regulations for similar operations. These amendments are also necessary to fulfill a requirement of the final judgment and order of the U.S. District Court in Sierra Club et al. vs. Watt et al., Civil Action No. 82-30.

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: See (5) above

(6) Any additional information or comments: None.

Tiering:
Was tiering applied? No. Under federal and state laws, these requirements must apply equally to all coal processing operations conducted under 405 KAR Chapters 7 through 24.

A fiscal note is not required for this regulation because it will have no impact on local government.

**EDUCATION AND HUMANITIES CABINET**
**Department of Education**
**Office of Local Services**
**(Proposed Amendment)**

**702 KAR 7:070. Interscholastic athletic eligibility and requirements; redshirting prohibited.**

RELATES TO: KRS 156.070
PURSUANT TO: KRS 156.070
NECESSITY AND FUNCTION: KRS 156.070 gives the State Board of Education the management and control of interscholastic athletics in the common schools, and the authority to designate an organization or agency to manage such athletics. This regulation is needed to establish with the public common schools a uniform system of eligibility to participate in interscholastic athletics and to designate an organization to manage interscholastic athletics in the secondary schools.

Section 1. Eligibility to Participate in Elementary School Athletics. (1) No pupil in the public common schools repeating the sixth grade during the 1985-86 school year, or enrolled in grades seven (7) through eight (8) during said year or thereafter and not subject to subsection (2) of this section, shall be eligible to participate in interscholastic athletics the second, or any subsequent, year the pupil is enrolled in the same grade, and no public common school shall participate in an athletic contest with another school that does not adhere to this policy.

(2) Any pupil enrolling in the sixth grade of a public common school, and not repeating said grade, during the 1985-86 school year, and any subsequent sixth grade enrollee, shall have three (3) school years from the time of initial sixth grade enrollment to complete his or her eligibility in elementary school interscholastic athletics. No public common school shall participate in an athletic contest with another school that does not adhere to this policy.

Section 2. Eligibility to Participate in Secondary School Athletics. (1) The eligibility of students to participate in interscholastic athletics at the secondary level shall be governed by the constitution bylaws and tournament rules of the Kentucky High School Athletic Association (KHSAA), 1985-86 [1984-85], a copy of which is presented herewith for filing with the Legislative Research Commission and incorporated by reference. A copy of said rules may be obtained from the Office of Instruction, Department of Education, Frankfort, Kentucky 40601.

(2)(a) Effective with the 1985-86 school year, pupils enrolling in the sixth grade of any school shall have seven (7) school years from the time of such enrollment to complete their eligibility in high school interscholastic athletics subject to the jurisdiction of KHSAA.

(b) No pupil enrolled in the seventh or eighth grade in 1985-86, or thereafter, and not subject to paragraph (a) of this subsection, shall be eligible for more than a total of one (1) year in each grade.

(c) No student who initially enrolled in the ninth grade during or prior to the 1985-86 school year or who is not otherwise subject to paragraph (a) of this subsection, and who has been enrolled in grades 9-12 eight (8) semesters, shall thereafter be eligible.

(d) The KHSAA shall adopt the provisions of this subsection as a part of its by-laws and shall fully implement and enforce said eligibility requirements for all high school athletics subject to its jurisdiction.

Section 3. Any public elementary or secondary school or school employee or official who knowingly allows participation of an ineligible player hereunder, or who, through reasonable diligence, should have known of such ineligibility, shall be considered in noncompliance with state accreditation standards or guilty of willful neglect of duty or breach of contract. Such shall apply not only to coaches but also to personnel supervising coaches; such as but not limited to an athletic director, an assistant principal, a principal, an assistant superintendent, a superintendent, or a school board member.

ALICE McDONALD, Superintendent
APPROVED BY AGENCY: November 6, 1985
FILED WITH LRC: November 13, 1985 at noon
PUBLIC HEARING SCHEDULED: A public hearing has been scheduled on Friday, December 27, 1985, at 10 a.m. EST in the State Board Room, First Floor, Capital Plaza Tower, Frankfort, Kentucky to review the regulations adopted by the State Board of Education at its November meeting. Those persons wishing to attend and testify shall contact in writing: Laurel True, Secretary, Kentucky State Board of Education, First Floor, Capital Plaza Tower, Frankfort, Kentucky 40601, on or before December 22, 1985. If no requests to testify have been received by that date, the above regulation will be removed from the agenda.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Gary Bale
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected: There will be no direct or indirect costs of implementing this change in regulation.
1. First year:
2. Continuing costs or savings:

3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements: There will not be additional reporting or paperwork required.
(2) Effects on the promulgating administrative body: This regulation will have no effect (financial/paperwork) on the promulgating administrative body.
(a) Direct and indirect costs or savings:
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements:
(3) Assessment of anticipated effect on state and local revenues: State and local revenues will not be affected.
(4) Assessment of alternative methods; reasons why alternatives were rejected: N/A
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: Bylaw 5 of the "Kentucky High School Athletic Association's Constitution and Bylaws."
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments:

Tiering:
Was tiering applied? No. Tiering not applied since all school boards (schools) must comply with elementary and secondary interscholastic athletics.

**EDUCATION AND HUMANITIES CABINET**
**Department of Education**
**Office of Instruction**
**(Proposed Amendment)**

**704 KAR 4:010. Physical education.**

RELATES TO: KRS 156.160
PURSUANT TO: KRS 156.070, 156.160
NECESSITY AND FUNCTION: KRS 156.160 requires the State Board of Education to adopt regulations governing medical inspection, physical education and recreation, and other rules and regulations deemed necessary or advisable for the protection of the physical welfare and safety of the public school children. This regulation implements that duty relative to health and physical educuation instruction.

Section 1. Elementary and secondary physical education programs or courses shall follow the descriptions and requirements recorded in the physical education section of the "Program of Studies for Kentucky Schools, Grades K-12," as adopted in 704 KAR 3:304, and in the minimum unit requirements for high school graduation set forth in 704 KAR 3:305.

Section 2. (1) A local board of education may authorize a child whose parents or guardian present a certificate from a licensed physician to the effect that because of the child's physical condition, participation in the required one-half (1/2) unit physical education course in high school is not in the best interest of the child, to substitute a physical education course which is within the capabilities of the child as specified by the child's physician.
(2)(a) A local board of education is authorized to exempt any child from the graduation requirements for physical education when the local board receives an affidavit from the parents of the child and the pastor of the church certifying that the child is a member of a nationally recognized and established church or religious denomination, the teachings of which are opposed to the physical education curriculum or attire. The affidavit shall identify the church tenet giving rise to such conscientiously held opposition, and any exemption hereunder shall not reduce the total number of credits necessary for graduation under 704 KAR 3:305.
(b) The local school district may, in the alternative, maintain the requirement of physical education for graduation, by allowing for more modest dress or classes segregated by sex for those students having conscientious religious objections if such will reasonably accommodate such objections.

ALICE McDONALD, Superintendent
APPROVED BY AGENCY: November 6, 1985
FILED WITH LRC: November 13, 1985 at noon
PUBLIC HEARING SCHEDULED: A public hearing has been scheduled on Friday, December 27, 1985, at 10 a.m. EST in the State Board Room, First Floor, Capital Plaza Tower, Frankfort, Kentucky to review the regulations adopted by the State Board of Education at its November meeting. Those persons wishing to attend and testify shall contact in writing: Laurel True, Secretary, Kentucky State Board of Education, First Floor, Capital Plaza Tower, Frankfort, Kentucky 40601, on or before December 22, 1985. If no requests to testify have been received by that date, the above regulation will be removed from the agenda.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Jim Fouche
(1) Type and number of entities affected: None
(a) Direct and indirect costs or savings to those affected:
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements:
(2) Effects on the promulgating administrative body: None
(a) Direct and indirect costs or savings:
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements:
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: None
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation

with conflicting provisions:
(6) Any additional information or comments: None

Tiering:
Was tiering applied? No. Need for uniformity.

**EDUCATION AND HUMANITIES CABINET**
**Department of Education**
**Office of Instruction**
**(Proposed Amendment)**

**704 KAR 7:020. Counselor; criteria and duties.**

RELATES TO: KRS 157.360
PURSUANT TO: KRS 156.070, 157.320
NECESSITY AND FUNCTION: KRS 157.360 requires the Superintendent of Public Instruction to allot to local school districts as part of the Foundation Program, classroom units for administrative and special instructional services; and 704 KAR 3:010 allows guidance counselor units as a form of ASIS units. This regulation is necessary to determine criteria for employment of counselor personnel in local schools and directions for appropriate functions.

Section 1. (1) Accreditation standards shall be the criterion for employment of counselors. Counselor units shall be considered on the basis of a minimum ratio of one (1) counselor unit for each 300 pupils in a school or schools served by the counselor. The required ratio shall be in accordance with accreditation standards.

(2) The scope of the school counselor's responsibility begins with the student's entrance into educational programs and concludes with efforts to affect successful transition from school to work or higher education.

(3) The school counselor shall work with all students individually and in groups, providing developmental, preventive and social/emotional, and physical needs, including programs to identify and address the needs of high risk students and dropouts.

(4) All counselors shall exercise their best efforts to provide direct services to students to help them do the following: develop a positive attitude toward self, others, and school; make decisions; recognize the importance of good attendance and work habits; see the value of education; realize the relationship between school and work; abstain from drug and alcohol use; cope with personal problems; recognize the need for self-discipline; and contribute positively to the school climate.

(5) The goal of the counselor shall be to assist students in achieving their potential by helping them gain the most from their educational experiences. In achieving this goal, the counselor shall provide continuing services that include counseling, information, consultation, coordination, program selection, and referral to students, parents, teachers, and administrators.

(6) The counselor's duties shall be determined as follows: School counselors shall spend at least seventy-five (75) percent of their work time in activities that provide for direct guidance and counseling services with students, parents, teachers, and administrators. The activities shall include:

(a) Individual and group guidance and counseling services - provide individual and group counseling and guidance activities in the areas of development, prevention, and crisis situations for students and parents.

(b) Information services - provide information for use in exploring and making decisions about educational, career, vocational, personal-social, and orientation issues.

(c) Consultation services - confer with parents, teachers, administrators, and community resource people in developing programs or activities to address personal, social, or instructional needs of students.

(d) Appraisal services - assist in the collection, maintenance, dissemination, and interpretation of information based on individual intellectual assessments, group tests, student records, individual assessments, observations, and other methods enabling parents, students, teachers and other support professionals to provide students with appropriate instructional programs.

(e) Coordination services - provide leadership, assist in plan development, and orchestrate the implementation of guidance activities for use by parents, teachers, administrators, and the community.

(f) Program selection services - assist in placing students in appropriate instructional, vocational, and career programs.

(g) Referral services - use local and state resources and agencies that provide specialized services to students and parents.

(7) School counselors shall spend no more than twenty (20) percent of their work time in activities aimed at planning and implementing the guidance and counseling program. These activities shall include, but are not limited to:

(a) Developing the annual Guidance Plan and evaluating the effectiveness of the guidance program and activities.

(b) Coordinating the maintenance of guidance records.

(c) Developing and coordinating a planned and continuous public relations program.

(d) Maintaining professional standards, skills, and competencies by attending courses, workshops, conferences, serving in professional organizations, and reading professional literature.

(e) Conducting research and follow-up studies that help evaluate and improve guidance programs in the school.

(8) School counselors shall spend no more than five (5) percent of their work time in activities not defined in this regulation; however, those activities should be consistent with the counselor's role.

(9) The counselor's duties shall be verified by the guidance plan of the school in which the counselor is to function and through the Kentucky Standards for Grading, Classifying and Accrediting Elementary, Middle, and Secondary Schools.

(10) An evaluation of the appropriateness and effectiveness of each district's counseling services will be included in the district's accreditation.

Section 2. [(1) The counselor's duties shall be determined by the guidance plan of the school in which the counselor is to function.]

(1) [(2)] Effective until September 1, 1987, persons certified and employed as school guidance counselors are recognized as qualified examiners for the purpose of administering,

scoring, and interpreting individual intellectual assessments of students in the public schools of the Commonwealth, as such intellectual assessments may be deemed necessary or advisable by local school districts, provided the local superintendent of schools appropriately determines a guidance counselor performing such duties meets the following requirements:

(a) The counselor has a minimum of three (3) hours of graduate course work in individual intellectual assessment;

(b) The counselor has had experiences in test administration, interpretation, and report writing under supervision and administers only those tests which were a part of the instruction;

(c) The counselor has had experiences in the identification and placement process for exceptional children; and

(d) The counselor has a job description and guidance plan which clearly state the assignment of individual intellectual assessment responsibilities on file with the Division of Student Services, Department of Education.

(2) [(3)] A letter from the local superintendent must be submitted to the Division of Student Services prior to December 31, 1985, verifying that the above requirements relative to administering, scoring, and interpreting individual intellectual assessments of students have been met.

(3) [(4)] From January 1, 1986, to September 1, 1987, no counselor may administer, score or interpret individual intellectual assessments, unless a letter of verification is on file with the Department of Education.

Section 3. On and after September 1, 1987, in order to be qualified to administer, score, or interpret individual intellectual assessments of students in the public schools of the Commonwealth, guidance counselors holding the verification as set forth in Section 2 of this regulation for the 1986-87 school year must, prior to September 1, 1987, satisfactorily complete appropriate requirements prescribed by the Counsel on Teacher Education and Certification and approved by the State Board of Education in order to receive a certificate endorsement for thereafter continuing the administration and interpretation of intelligence assessments. After September 1, 1987, in order to administer, score and interpret intelligence assessments, guidance counselors not so verified for the 1986-87 school year must complete a course of study as prescribed by the Counsel on Teacher Education and Certification and approved by the State Board of Education and receive a certificate endorsement for the administration and interpretation of intellectual assessments, in order to be recognized as a qualified examiner for such purpose.

ALICE McDONALD, Superintendent

APPROVED BY AGENCY: November 6, 1985

FILED WITH LRC: November 13, 1985 at noon

PUBLIC HEARING SCHEDULED: A public hearing has been scheduled on Friday, December 27, 1985, at 10 a.m. EST in the State Board Room, First Floor, Capital Plaza Tower, Frankfort, Kentucky to review the regulations adopted by the State Board of Education at its November meeting. Those persons wishing to attend and testify shall contact in writing: Laurel True, Secretary, Kentucky State Board of Education, First Floor, Capital Plaza Tower, Frankfort, Kentucky 40601, on or before December 22, 1985. If no requests to testify have been received by that date, the above regulation will removed from the agenda.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Margaret McClain

(1) Type and number of entities affected: School districts employing school counselors.

(a) Direct and indirect costs or savings to those affected:

1. First year: No additional costs or savings anticipated.

2. Continuing costs or savings: N/A

3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A

(b) Reporting and paperwork requirements: Counselors will be required to report their duties as part of their annual plan and evaluation.

(2) Effects on the promulgating administrative body: N/A

(a) Direct and indirect costs or savings: N/A

1. First year: N/A

2. Continuing costs or savings: N/A

3. Additional factors increasing or decreasing costs: N/A

(b) Reporting and paperwork requirements: N/A

(3) Assessment of anticipated effect on state and local revenues: N/A

(4) Assessment of alternative methods; reasons why alternatives were rejected: The office was required by State Board action to examine existing regulations on the duties of school counselors and to make recommendations to the State Board. As the method was specifically set forth by the State Board, no alternatives were available.

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication:

(a) Necessity of proposed regulation if in conflict: N/A

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A

(6) Any additional information or comments:

Tiering:
Was tiering applied? No. Need for uniformity.

## PUBLIC PROTECTION AND REGULATION CABINET
## Public Service Commission
## (Proposed Amendment)

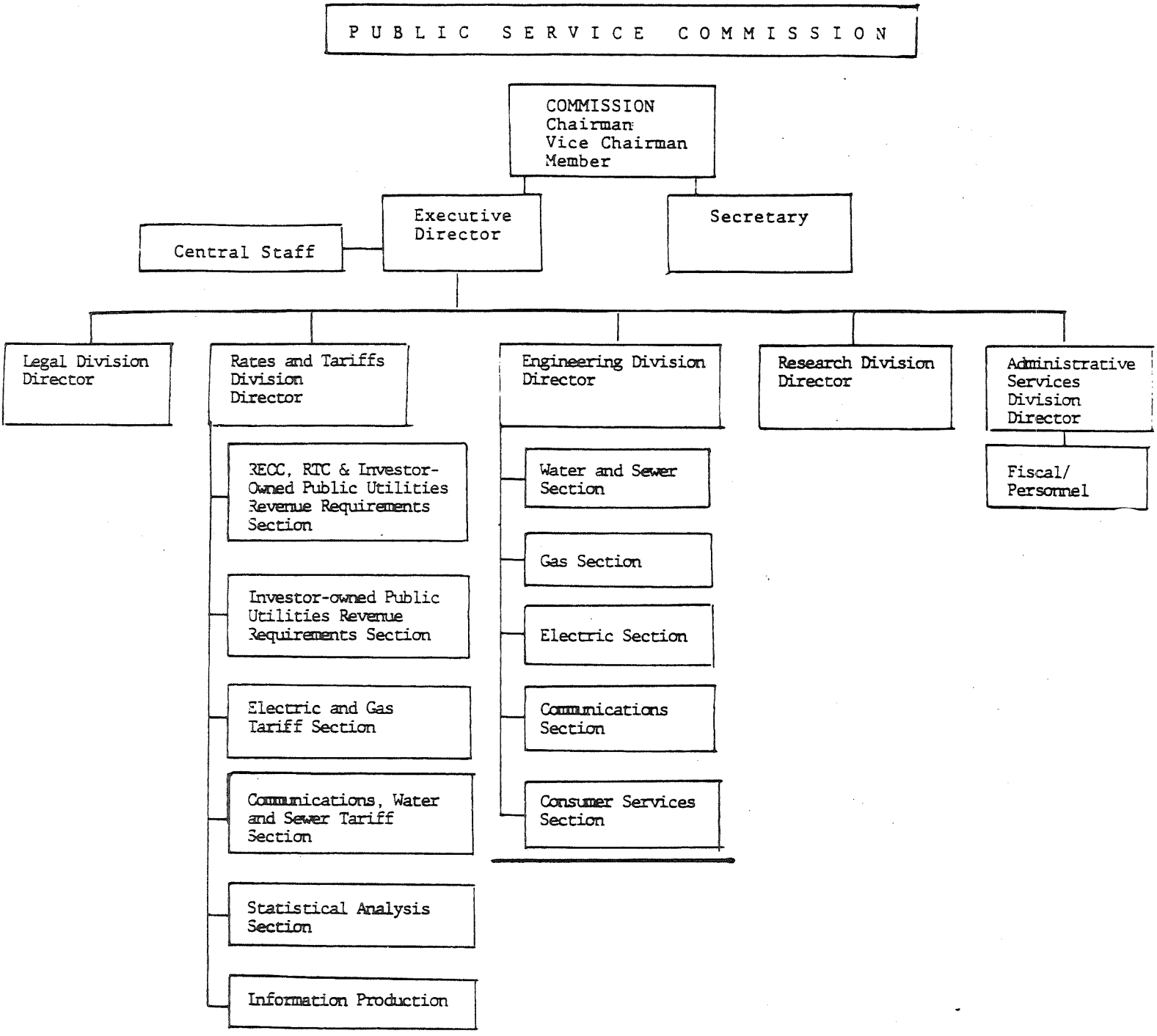
**807 KAR 5:002. Organization.**

RELATES TO: KRS Chapter 278

PURSUANT TO: KRS 278.115

NECESSITY AND FUNCTION: KRS 278.115 provides that the Public Service Commission shall organize its offices for administration and management under the executive director. This regulation prescribes the organization of the Public Service Commission's offices.

Section 1. The offices of the Public Service Commission are organized for administration and management under the executive director, adopted December 1, 1985 [May 31, 1983], to reflect their functions as follows:


PUBLIC SERVICE COMMISSION
COMMISSION
Chairman
Vice Chairman
Member
Executive Director
Secretary
Central Staff
Legal Division Director
Rates and Tariffs Division Director
Engineering Division Director
Research Division Director
Administrative Services Division Director
Fiscal/ Personnel
RECC, RTC & Investor-Owned Public Utilities Revenue Requirements Section
Investor-owned Public Utilities Revenue Requirements Section
Electric and Gas Tariff Section
Communications, Water and Sewer Tariff Section
Statistical Analysis Section
Information Production
Water and Sewer Section
Gas Section
Electric Section
Communications Section
Consumer Services Section

RICHARD D. HEMAN, JR., Chairman
MELVIN H. WILSON, Secretary
APPROVED BY AGENCY: November 14, 1985
FILED WITH LRC: November 14, 1985 at 4 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 23, 1985, at 9 a.m. EST, in the Public Service Commission Hearing Room No. 1 on Schenkel Lane in Frankfort, Kentucky. Those interested in attending this hearing shall contact: Forest M. Skaggs, Secretary, Kentucky Public Service Commission, P. O. Box 615, Frankfort, Kentucky 40602.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Claude G. Rhorer, Jr.
(1) Type and number of entities affected: All utilities subject to PSC jurisdiction.
(a) Direct and indirect costs or savings to those affected:
1. First year: $106,100 will be required to administer the program within the commission and this expense will be paid by the affected utilities.
Savings: Savings equal to or exceeding the cost should result due to a better informed public and increased efficiency in the handling of complaints by the utilities.
2. Continuing costs or savings: $112,400 will be required during the second year and similar amounts will be needed each year thereafter. Similar savings will also occur each year.
3. Additional factors increasing or decreasing costs (note any effects upon competition): None
(b) Reporting and paperwork requirements: Detailed report after complaint investigation.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: $106,100 will be required to administer the program.
2. Continuing costs or savings: $112,400 will be required during the second year and similar amounts will be needed each year thereafter.
3. Additional factors increasing or decreasing costs: None
(b) Reporting and paperwork requirements: Detailed reports on complaint investigations and audit reports on utility complaint procedures.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: Proposed amendments are designed to improve regulatory efficiency while maintaining public protection. Alternatives considered were contrary to this goal.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? No. N/A

**PUBLIC PROTECTION AND REGULATION CABINET**
**Public Service Commission**
**(Proposed Amendment)**

**807 KAR 5:006. General rules.**

RELATES TO: KRS Chapter 278
PURSUANT TO: KRS 278.280(2)
NECESSITY AND FUNCTION: KRS 278.280(2) provides that the commission shall prescribe rules for the performance of any service or the furnishing of any commodity by any utility. This regulation establishes general rules which apply to electric, gas, water, sewage and telephone utilities.

Section 1. General Provisions. (1) The adoption of regulations by the commission shall not preclude the commission from altering or amending the same in whole or in part, or from requiring any other or additional service, equipment, facility, or standards, either upon request, or upon its own motion, or upon the application of the utility. No regulation of the commission shall in any way relieve a utility from any of its duties under the laws of this state.
(2) Whenever standards or codes are referred to in the commission's regulations it is understood that utilities employing competent corps of engineers are not to be prohibited thereby from continuing or initiating experimental work and installations which tend to improve, decrease the cost of, or increase the safety of their service.

Section 2. Definitions. In addition to the definitions as set out in KRS 278.010, the following definitions shall be used in interpreting the commission's regulations:
(1) "Commission" means the Public Service Commission.
(2) "Utility" means a [n energy] utility as defined in KRS 278.010(3).
(3) "Customer" means any person, firm, corporation or body politic supplied service by any [electric, gas or combined energy-non-energy] utility.

Section 3. Reports. (1) Financial and statistical reports. Every utility shall file annually a financial and statistical report upon forms to be furnished by the commission. Said report shall be based upon the accounts set up in conformity with the commission's order adopting uniform classification of accounts for utilities. This report shall be filed on or before March 31, each year. For good cause shown, the commission may, upon application in writing, allow a reasonable extension of time for such filing.
(2) Report of meters, customers and refunds. Every utility shall make periodical reports on such forms as may be prescribed, of meter tests, number of customers and amount of refunds.
(3) Other reports. Every utility shall make such other reports as the commission may at its discretion from time to time require.
(4) All records and reports shall be retained in accordance with the uniform system of accounts unless otherwise specified herein.
(5) All reports shall be accompanied by two (2) copies of a transmittal letter describing the report being furnished.

Section 4. Service Information. (1) The utility shall, on request, give its customers or prospective customers such information as is reasonably possible in order that they may secure safe, efficient and continuous service. The utility shall inform its customers of any change made or proposed in the character of its service which might affect the efficiency, safety, or continuity of operation.

(2) Prior to making any substantial change in the character of the service furnished, which would affect the efficiency, adjustment, speed or operation of the equipment or appliances of any customer, the utility shall obtain the approval of the commission. The application shall show the nature of the change to be made, the number of customers affected, and the manner in which they will be affected.

(3) The utility shall inform each applicant for service of the type, class and character of service that is available to him or her at his or her location.

Section 5. Special Rules or Requirements. (1) No utility shall establish any special rule or requirement without first obtaining the approval of the commission on proper application.

(2) A customer who has complied with the regulations of the commission shall not be denied service for failure to comply with the rules of the utility which have not been made effective in the manner prescribed by the commission.

Section 6. Meter Readings and Information. (1) Information on bills. Each bill rendered periodically by utilities shall show the class of service, the present and last preceding meter readings, the date of the present reading, the number of units consumed, the meter constant, if any, the net amount for service rendered, all taxes, the adjustments, if any, and the gross amount of the bill. The date after which a penalty may apply to the gross amount must be indicated. Estimated or calculated bills shall be distinctly marked as such. The rate schedule under which the bill is computed shall be furnished under one (1) of the following methods:

(a) By printing rate schedule on the bill.

(b) By publishing in a newspaper of general circulation once each year or when rate is changed.

(c) By mailing to each customer once each year or when rate is changed.

(d) By providing a place on each bill where a customer may indicate his desire for a copy of the applicable rates and furnishing same by return first class mail.

(2) Meter readings. The registration of each meter shall read in the same units as used for billing unless a conversion factor be shown on the billing forms and if the meter does not read direct, the constant shall be plainly marked on the face of the meter dial.

(3) Flat rates. Flat rates for unmetered service shall approximate as close as possible the utility's rates for metered service and the rate schedule shall clearly set out the basis upon which consumption is estimated.

(4) Utilities now using or desiring to adopt mechanical billing or other billing systems of such a nature as to render compliance with all of the terms of subsection (1) of this section impracticable may make application to the commission for relief from part of these terms. For good cause shown, the commission may allow the omission of part of these requirements. Each utility shall submit the form of bill to be used by it to the commission for its approval.

(5) Each utility using customer-read meter information shall initiate a program to read each revenue related meter on its system at least once during each calendar year. Records shall be kept by the utility to insure that this information is available to the commission staff and any customer requesting such information.

Section 7. Deposits. (1) A utility may require from any customer or applicant for service a minimum cash deposit or other guaranty to secure payment of bills of an amount not to exceed two-twelfths (2/12) of the estimated annual bill of such customer or applicant, where bills are rendered monthly or an amount not to exceed three-twelfths (3/12) of the estimated annual bill of such customer or applicant, where bills are rendered bimonthly or an amount not to exceed four-twelfths (4/12) of the estimated bill of such customer or applicant where bills are rendered quarterly. The utility may require an equal deposit from all applicants for the same class of service. If the utility retains a residential deposit for more than eighteen (18) months, it shall advise the customer that the deposit will be recalculated based on actual usage upon the customer's request. The notice of deposit recalculation shall state that if the deposit on account differs by more than ten (10) dollars from the deposit calculated on actual usage, then the utility shall refund any over collection and may collect any underpayment. Refunds may be made by check or by credit to the customer's bill.

(2) Notification of a customer's right to a deposit recalculation shall be made at least once annually. The notice may be made by means of a general mailing (or bill stuffer) to all customers which specifies the above conditions.

(3) The refund provisions contained in subsection (1) of this section notwithstanding, a utility shall not be required to refund any excess deposit if the customer's bill is delinquent by more than one (1) billing period at the time of recalculation.

(4) The utility shall issue to every customer from whom a deposit is received a certificate of deposit, showing the name of the customer, location of initial premises occupied, date and amount of the deposit. If a residential deposit is recalculated in accordance with the above provisions, the customer shall return the original certificate of deposit to the utility in return for a new, accurate certificate.

Section 8. Complaints. Upon complaint to the utility by a customer either at its office or in writing, the utility shall make a prompt and complete investigation and advise the complainant thereof. It shall keep a record of all such complaints concerning its utility service which shall show the name and address of the complainant, the date and nature of the complaint, and the adjustment or disposition thereof. Such records shall be maintained for five (5) years from the date of the resolution of the complaint.

Section 9. Bill Adjustment. (1) Whenever a meter in service is found upon periodic request or complaint test to be more than two (2)

percent fast, additional tests shall be made at once to determine the average error of the meter. Said tests shall be made in accordance with the commission's regulation applicable to the type of meter involved.

(2) If the result of tests on a customer's meter shows an average error greater than two (2) percent fast, then the customer's bills, for the period during which the meter error is known to have existed, shall be recomputed and the account adjusted on the basis of the test. In the event the period during which the meter error existed is unknown, then the customer's bill shall be recomputed for one-half (1/2) of the elapsed time since the last previous test or for the past twelve (12) month period, whichever is less [but in no case to exceed twelve (12) months]. (See exception in subsection (5) of this section.)

(3) If the result of tests on a customer's meter shows an average error greater than two (2) percent slow, then the customer's bill, for the period during which the meter error is known to have existed, may be recomputed and the account adjusted on the basis of the test. In the event the period during which the meter error existed is unknown, then the customer's bill may be recomputed for one-half (1/2) of the elapsed time since the last previous test but in no case to exceed twelve (12) months.

(4) It shall be understood that when a meter is found to have an error in excess of two (2) percent fast or slow the figure for calculating the amount of refund or the amount to be collected by the utility shall be that percentage of error as determined by the test; i.e., it is the duty of the utility to maintain the accuracy of its measuring devices as nearly 100 percent as is commercially practicable. Therefore, percent error shall be that amount of error as is indicated by the test.

(5) The burden of maintaining measuring equipment so that it will register accurately is upon the utility; therefore, if meters are found upon test to register fast and if time for periodic test has passed the refund shall be for the twelve (12) months specified in subsection (2) of this section plus the time exceeding the periodic test period; provided, however, that the commission may relieve the utility from this requirement in any particular case in which it is shown that the failure to make the periodic test was due to causes beyond the utility's control.

(6) Each utility shall establish procedures, to be included in its rules and regulations, to monitor customers' usage and shall file the procedures with the Commission for review. The procedures shall be designed to draw the utility's attention to unusual deviations in a customer's usage and shall provide for reasonable means by which the utility may determine the reasons for the unusual deviation. If a customer's usage is unduly high and the deviation is not otherwise explained, the utility shall test the customer's meter in accordance with subsections (2), (3) or (5) of this section.

(7) In instances in which the utility's procedure for monitoring usage indicates that an investigation of a customer's usage is necessary, the utility shall notify the customer either during or after the investigation of the reasons for the investigation, and of the findings of the investigation. In those instances where knowledge of a serious situation requires more immediate notice, the utility shall notify the customer by the most expedient means available.

(8) When a meter is tested and it is found necessary to make a refund or back bill a customer, the customer shall be notified in substantially the following form:

On _____, 19_____, the meter bearing identification No._____ installed in your building located at _____ (Street and Number) in _____ (City) was tested at _____ (on premises or elsewhere) and found to register _____ (Percent fast or slow). The meter was tested on _____ (Periodic, Request, Complaint) test.

Based upon this we herewith _____ (Charge or Credit) you with the sum of $_____, which amount has been noted on your regular bill.

(9) Whenever it is determined that a customer has been incorrectly billed for any reason, other than a meter which was registering incorrectly due to being out of tolerance, the utility may immediately attempt to determine the period during which the error has existed, and the customer's bill for the period during which the error is known to have existed may be recomputed, and the account readjusted to give a refund or collect an additional amount of revenue from the underbilled. The basis for recomputing the customer bills shall be based upon the historic usage data for the customer over the previous time period, unless that information is not available; and in that case, then an average usage of similar customer loads over the previous time period involved shall be used in this adjustment. In the event the period during which the error existed is unknown, the customer's bill may be recomputed for one-half (1/2) of the elapsed time since the last previous test, or the past twelve (12) month period, whichever is less.

Section 10. Customer's Discontinuance of Service. (1) Any customer desiring service discontinued or changed from one address to another shall give the utility three (3) working days' notice in person or in writing, provided such notice does not violate contractual obligations.

(2) Upon request that service be reconnected at any premises subsequent to the initial installation or connection to its service lines, the utility may, subject to subsection (3) of this section, charge the applicant an amount not to exceed the actual average cost as approved by this commission of making such reconnection.

(3) Any utility desiring to establish a disconnection and/or reconnection charge under the provisions of subsection (2) of this section, shall submit for commission approval a formal application setting out:

(a) The actual average cost of making such

reconnections; and

(b) The effect of such charges on the utility's revenues.

Section 11. Discontinuance of Service. (1) The utility may refuse or discontinue to serve an applicant or customer under the following conditions:

(a) For noncompliance with the utility's or commission's rules and regulations. However, no utility shall discontinue or refuse service to any customer or applicant for violation of its rules or regulations without first having made a reasonable effort to induce the customer or applicant to comply with its rules and regulations as filed with the commission. After such effort on the part of the utility, service may be discontinued or refused only after the customer shall have been given at least ten (10) days written notice of such intention, delivered to an adult member of his or her household or mailed to his or her last known address.

(b) When a dangerous condition is found to exist on the customer's or applicant's premises, the service shall be cut off without notice or refused, provided that the utility notify the customer or applicant immediately of the reasons for the discontinuance or refusal and the corrective action to be taken by the applicant or customer before service can be restored.

(c) When a customer or applicant refuses or neglects to provide reasonable access to the premises for the purpose of installation, operation, meter reading, maintenance or removal of utility property, the utility may discontinue or refuse service only after the customer or applicant shall have been given at least fifteen (15) days' written notice of such intention.

(d) Except as provided in subsection (2) of this section, a utility shall not be required to furnish service to any applicant when such applicant is indebted to the utility for service furnished until such applicant shall have paid such indebtedness.

(e) A utility may refuse or discontinue service to a customer or applicant if the customer or applicant does not comply with state, municipal or other codes, rules and regulations applying to such service.

(2) A gas or electric utility may discontinue service under the following conditions:

(a) For nonpayment of bills - ten (10) day notice. However, no utility shall discontinue service to any customer for nonpayment of bills (including delayed charges) without first having made a reasonable effort to induce the customer to pay same. The customer shall be given at least ten (10) days' written notice, but the cut-off shall not be effected before twenty-seven (27) days after the mailing date of the original bill. Such termination notice shall be exclusive of and separate from <u>any</u> [the original] bill. If prior to discontinuance of service, there is delivered to the utility office, payment of the amount in arrears, then discontinuance of service shall not be made, or where a written certificate is filed signed by a physician, a registered nurse or a public health officer stating that, in the opinion of the person making the certification discontinuance of service will aggravate an existing illness or infirmity on the affected premises, service shall not be discontinued until the affected resident can make other living arrangements or until thirty (30) days elapse from the time of the utility's notification to the customer in writing of the existence of local, state and federal programs, providing for the payment of utility bills under certain conditions and of the offices to contact for such possible assistance. Service shall not be discontinued when the customer and the utility have reached agreement on a partial payment plan pursuant to subparagraph 1 of this paragraph and the customer is meeting the requirements of the plan. The written notice for any discontinuance of service shall advise the customer of his or her rights under this paragraph, subparagraph 1 and subparagraph 2 of this paragraph and of his or her right to dispute the reasons for such discontinuance.

1. Employee available to answer consumer questions and negotiate partial payment plan.

a. Every gas and electric utility shall have an employee available to answer questions regarding a customer's bill and to resolve disputes over the amount of such bill. Utilities shall keep the designated employee informed of the commission's regulations regarding customer bills. If a customer indicates to any utility personnel that he or she is experiencing difficulty in meeting a current utility bill, that employee shall be able to refer the customer to the designated employee for explanation of the customer's rights under this paragraph and 807 KAR 5:008. The designated employee shall be authorized to negotiate partial payment plans of an outstanding bill and accept payments where the customer has shown good faith in attempting to meet his or her financial obligations to the utility. Said employee shall be authorized by the utility to consider and shall consider proposals by the customer for a partial payment plan and retention of service. Each gas and electric utility shall also prominently display in each office in which payment is received a summary of the customer's rights under this section and 807 KAR 5:008.

b. Each utility shall maintain a telephone, shall publish the telephone number in all service areas, and shall make the necessary provisions so that all customers may contact the utility employee without charge. Such provisions may include a policy allowing customers to make collect calls to the utility.

c. Each <u>major</u> [Class A or B] utility (as defined by the Uniform System of Accounts) shall have at least one (1) employee available to answer consumer questions and negotiate partial payment plans at the utility's office during the utility's established working hours but not less than seven (7) hours per day, five (5) days per week excluding holidays.

d. Each <u>minor</u> [Class C or D] utility (as defined by the Uniform System of Accounts) shall have an employee available to answer consumer questions and negotiate partial payment plans at the utility's office during the utility's established office hours but not less than seven (7) hours per day, one (1) day per week.

2. Certificate of need from Department for Social Insurance. Federal and statewide energy assistance programs are administered by the Kentucky Cabinet for Human Resources, Department for Social Insurance. Upon written certification from <u>the Department for Social Insurance, issued at</u> one (1) of its offices <u>or the office of its designee,</u> a customer who is eligible for energy assistance under the Department's guidelines or

is certified as being in genuine financial need, defined as any household with gross income at or below 130 percent of the poverty level, and who has been issued a ten (10) day notice between December 1 and March 1 for nonpayment of a gas or electric bill and who presents such notice to the Department for Social Insurance or its designee, shall be allowed thirty (30) days in addition to such ten (10) day period in which to negotiate a partial payment plan with the utility provided such certification is delivered to the utility during the initial ten (10) day notice period by the applicant in person, by his or her agent, by mail, or by a telephone call from an employee of the Department for Social Insurance or its designee. The thirty (30) day period shall begin to run at the end of the tenth day of the ten (10) day period. When the customer exhibits good faith by offering to make a present payment commensurate with his or her ability to do so and by agreeing to a repayment schedule which would permit the customer to become current in the payment of his or her gas or electric bill as soon as possible but not later than October 15, the utility shall accept such partial payment plan. In addition to advising the customer of his or her rights under this paragraph, subparagraph 1 of this paragraph and this subparagraph, as required by paragraph (a) of this paragraph, the ten (10) day notice or a bill insert sent with the ten (10) day notice shall inform the customer of the telephone number and address of the nearest office of the Kentucky Cabinet for Human Resources, Department for Social Insurance. Referral of such customer to such office of the department may be made by a church, by a charitable or social organization, by a unit of state or local government, or by any other person.

3. Budget payment plan. Each jurisdictional gas and electric utility shall develop a budget payment plan whereby a customer may elect to pay a fixed amount each month on a yearly basis in lieu of monthly billings based on actual usage. The provisions of this section relating to partial payments and budget plans shall apply primarily [only] to a utility's residential customers; however, a utility may offer budget payment plans to other classes of customers. It shall be the responsibility of the utility to disseminate information to its customers regarding the availability of such budget payment plan. If the commission finds, upon application, a budget plan for residential customers would materially impair or damage the utility's credit or operations, then it may grant the utility an exemption from the requirements of the budget plan. No exemption may extend beyond one (1) year without another application by the utility and a finding by the commission that said exemption should be allowed.

(b) For fraudulent or illegal use of service. When the utility has discovered evidence that by fraudulent or illegal means a customer has obtained unauthorized service or has diverted the service for unauthorized use or has obtained service without same being properly measured, the service to the customer may be discontinued without notice. The utility shall not be required to restore service until the customer has complied with all rules of the utility and regulations of the commission and the utility has been reimbursed for the estimated amount of the service rendered and the cost to the utility incurred by reason of the fraudulent use.

(3) A water, sewage or telephone utility may discontinue service under the following conditions:

(a) For nonpayment of bills. However, no utility shall discontinue service to any customer for nonpayment of bills (including delayed charges) without first having made a reasonable effort to induce the customer to pay same. The customer shall be given at least forty-eight (48) hours written notice, but the cut-off shall not be effected before twenty (20) days after the mailing date of any [the original] bill. Such termination notice shall be exclusive of and separate from the original bill. If prior to discontinuance of service, there is delivered to the utility office payment of the amount in arrears, then discontinuance of service shall not be made, or where a written certificate is filed signed by a physician, a registered nurse or a public health officer stating that, in the opinion of the person making the certification discontinuance of service will aggravate an existing illness or infirmity on the affected premises, service shall not be discontinued until the affected resident can make other living arrangements or until ten (10) days elapse from the time of the utility's notification.

(b) For fraudulent or illegal use of service. When the utility has discovered evidence that by fraudulent or illegal means a customer has obtained unauthorized service or has diverted the service for unauthorized use or has obtained service without same being properly measured, the service to the customer may be discontinued without notice. The utility shall not be required to restore service until the customer has complied with all rules of the utility and regulations of the commission and the utility has been reimbursed for the estimated amount of the service rendered and the cost to the utility incurred by reason of the fraudulent use.

(4) It shall be the duty of the utility before making service connections to a new customer to ascertain the condition of the meter and service facilities for such customer in order that prior fraudulent use of the facilities, if any, will not be attributed to the new customer, and the new customer shall be afforded the opportunity to be present at such inspections. The utility shall not be required to render service to such customer until all defects in the customer-owned portion of the service, if any, shall have been corrected.

(5) Reconnection. For all cases of refusal or discontinuance of service as herein defined, except as provided in 807 KAR 5:008, where the cause for refusal or discontinuance has been corrected and all rules and regulations of the utility and the commission have been complied with, the utility shall promptly render service to the customer or applicant.

(6) When advance notice is required, such notice may be given by the utility by mailing by United States mail, postage prepaid, to the last known address of the applicant or customer.

Section 12. Special Charges. (1) A utility may make a reasonable charge for each of the following trips:

(a) To read a meter when the customer has failed to read the meter for three (3) consecutive billing periods. This pertains only to those utilities whose customers ordinarily

read their own meters.

(b) To collect a delinquent bill. This trip may be made only after written notice has been sent to the customer stating that if the bill is not paid by a certain date, the service will be disconnected.

(c) To reconnect a service that has been disconnected for nonpayment of bills or for violation of the utility's or commission's rules and regulations. This charge may include the cost of disconnecting the service and, in accordance with Section 10 of this regulation, shall not exceed the actual average cost.

(2) The charges, however, shall be applied uniformly within reasonable classifications throughout the entire area served by the utility, shall be incorporated in the utility's rules and regulations, shall be subject to the approval of the commission, and shall yield only enough revenue to pay the expenses incurred in rendering these services.

Section 13. Meter Testing. (1) All electric, gas and water utilities furnishing metered service shall provide meter standards and test facilities, as more specifically set out under 807 KAR 5:022, 807 KAR 5:041 and 807 KAR 5:066. Before being installed for the use of any customer, all electric, gas and water meters shall be tested and in good working order and shall be adjusted as close to the optimum operating tolerance as possible, as more specifically set out in 807 KAR 5:022, Section 8(3)(a), 807 KAR 5:041, Section 17(1)(a)-(c) and 807 KAR 5:066, Section 16(2)(a)-(b).

(2) A utility may have all or part of its testing of meters performed by another utility or agency approved by the commission for such purpose. Each utility having tests made by another agency or utility shall notify the commission of said arrangements in detail to include make, type and serial number of standards used to make said checks or tests.

(3) No utility shall place in service any basic measurement standard required by these rules unless it has been calibrated by the commission's Meter Standards Laboratory. All utilities or agencies making tests or checks for utility purposes shall notify the commission promptly of the adoption or deletion of any basic standards requiring calibration by the commission.

(4) Each electric, gas and water utility or agency doing meter testing for a utility shall have in its employ meter testers certified by this commission. These certified meter testers shall perform such tests as may be necessary to determine the accuracy of the utility's meters and to adjust the utility's meters to the degree of accuracy required by the regulations of the commission.

(5) A utility or agency desiring to have its employees certified as meter testers shall submit the names of applicants on the commission's form entitled "Application for Appointment of Meter Testers" and after compliance with the requirements noted in this form, the applicant may be certified as a meter tester and furnished with a card authorizing him or her to perform meter tests.

(6) A utility or agency may employ apprentices in training for certification as meter testers. The apprentice period shall be a minimum of six (6) months. All tests performed during this period by an apprentice shall be witnessed by a certified meter tester.

Section 14. Access to Property. The utility shall at all reasonable hours have access to meters, service connections and other property owned by it and located on customer's premises for purposes of installation, maintenance, meter reading, operation or removal of its property at the time service is to be terminated. Any employee of the utility whose duties require him or her to enter the customer's premises shall wear a distinguishing uniform or other insignia, identifying him or her as an employee of the utility, or carry a badge or other identification which will identify him or her as an employee of the utility, the same to be shown by him or her upon request.

Section 15. Meter Test Records. (1)(a) Test cards. A complete record of all meter tests and adjustments and data sufficient to allow checking of test calculations shall be recorded by the meter tester. Such record shall include: Information to identify the unit and its location; the date of tests; the reason for such tests; readings before and after the test; a statement of "as found" and "as left" accuracies sufficiently complete to permit checking of the calculations employed; indications showing that all required checks have been made; a statement of repairs made, if any; the identifying number of the meter; the type and capacity of the meter; and the constant of the meter.

(b) The complete record of tests of each meter shall be continuous for at least two (2) periodic test periods and shall in no case be less than two (2) years. [The record of the prior periodic test of each meter shall be maintained for at least ninety (90) days after the current test has been made or until a refund or billing has been made or it is determined that à refund or billing is not to be made in accordance with Section 9 of this regulation.]

(2) History. Each utility shall keep numerically arranged and properly classified records giving for each meter owned and used by the utility for any purpose the identification number, date of purchase, name of manufacturer, serial number, type, rating, and the name and address of each customer on whose premises the meter has been in service with date of installation and removal. These records shall also give condensed information concerning all tests and adjustments including dates and general results of such adjustments. The records shall be of such character that a system can be used that will record the date of the last test and indicate the proper date for the next periodic test required by the applicable regulation of the commission.

(3) Sealing of meters. Upon completion of adjustment and test of any meter under the provisions of the regulations of the commission, the utility shall affix thereto a suitable seal in such a manner that adjustments or registration of the meter cannot be tampered with without breaking the seal. The seal shall be of a type acceptable to the commission.

(4) A utility may store any or all of the meter test and historical data described or required in subsections (1) and (2) of this section in a computer storage and retrieval system upon notification to the commission.

Section 16. Pole Identification. (1) Each

utility owning poles or other structures supporting the company's wires, shall mark every pole or structure located within a built-up community with the initials or other distinguishing mark by which the owner of every such structure may be readily determined. For the purpose of this rule the term "built-up community" shall mean urban areas and those areas immediately adjacent thereto.

(2) Identification marks may be of any type but must be of a permanent material and shall be of such size and so spaced and hereafter maintained so as to be easily read from the surface of the ground at a distance of six (6) feet from the structure.

(3) When utilities' structures are located outside of a built-up community only every tenth structure need be so marked.

(4) All junction structures shall bear the identification mark and structure number of the owner.

(5) Poles need not be marked if they are clearly and unmistakably identifiable as the property of the utility.

(6) Each utility shall either number their structures and maintain a numbering system or use some other method of identification so that each structure in the system may be easily identified.

(7) The requirements herein shall apply to all existing structures and those hereafter erected and to all changes in ownership.

Section 17. Cable Television Pole Attachments and Conduit Use. (1) Each utility owning poles or other facilities conducting the company's wires shall permit cable television system operators who have all necessary licenses and permits to attach cables to such poles and to use such facilities, as customers, for transmission of signals to their patrons.

(2) The rates, terms and conditions on which such use of the utility's facilities are made shall be set forth in the tariffs of the utilities, which shall be prepared and filed in accordance with the regulations of the commission governing tariffs generally.

(3) With respect to a complaint proceeding in any individual matter concerning cable television pole attachments before the commission, final action shall be taken on the same within a reasonable time, but in no event to exceed 360 days.

Section 18. [17.] System Maps and Records. (1) Each utility shall have on file at its principal office located within the state and shall file upon request with the commission a map or maps of suitable scale of the general territory it serves or holds itself ready to serve showing the following:

(a) Operating districts.

(b) Rate districts.

(c) Communities served.

(d) Location and size of transmission lines, distribution lines and service connections.

(e) Location and layout of all principal items of plant.

(f) The date of construction of all items of plant by year and month.

(2) In each division or district office there shall be available such information relative to the utility's system as will enable the local representative to furnish necessary information regarding the rendering of service to existing and prospective customers.

(3) In lieu of showing the above information on maps a card record or suitable means may be used. For all construction the records shall also show the date of construction by month and year.

Section 19. [18.] Location of Records. All records required by the regulations of the commission shall be kept in the principal office of the utility or other acceptable safe storage place, and shall be made available to representatives, agents or employees of the commission upon reasonable notice and at all reasonable hours.

Section 20. [19.] Request Tests. Each utility shall make a test of any meter upon written request of any customer provided such request is not made more frequently than once each twelve (12) months. The customer shall be given the opportunity of being present at such request tests. If such tests show that the meter was not more than two (2) percent fast, the utility may make a reasonable charge for the test, the amount of such charge to be set out in the utility's rules and regulations filed with the commission, and subject to the approval of the commission.

Section 21. [20.] Complaint Tests. [(1)] Any customer of the utility may request a meter test by written application to the commission, after having first obtained a test from the utility [accompanied by payment of such fee for the test as prescribed below]. Such request may not be made more frequently than once each twelve (12) months. Upon receipt of such request, the commission will notify the utility to leave the customer's meter in place until such time as a commission representative is present to witness the removal and testing of said meter [completion of such test].

[(2) If a meter tested upon complaint of a customer is found to register not more than two (2) percent fast, the cost of such test shall be borne by the customer. However, if the meter shall be found to register more than two (2) percent fast, the cost of such test shall be borne by the utility and the amount of the deposit made by the customer shall be refunded.]

[(3) The charges fixed by the commission for making such tests are as follows:]

[(a) Electric. Direct current and single phase alternating current watt hour meters operating on circuits of not more than 250 volts:]

| [Amperes Rated Capacity | Fee |
|---|---|
| 30 and under | $ 6 |
| Over 30 to 100 | 12 |
| Each additional 50 amperes or factor thereof | 3] |

[Polyphase a.c. watt hour meters and single phase or direct current watt hour meters operating on circuits of over 250 volts with or without instrument transformers:]

| [Kilowatts Rated Capacity | Fee |
|---|---|
| 5 KW and under | $ 6 |
| Over 5 to 25 | 12 |
| Over 25 to 100 | 24 |
| Over 100 to 500 | 48] |

[Plus one-half (1/2) of the cost of

transportation of the commission representative between the office of the commission and the point of test.]

[(b) Gas. Displacement type meters operating on distribution system pressures:]

| [Capacity in Cu. Ft. Per Hour | Fee |
|---|---|
| 1,000 cu. ft. per hour and under | $12 |
| Over 1,000 to 10,000 | 24 |
| Over 10,000 to 100,000 | 36] |

[Plus one-half (1/2) of the cost of transportation of the commission representative between the office of the commission and the point of test.]

[(c) Water:

| Size | Fee |
|---|---|
| Outlet 1 inch or less | $12 |
| Outlet over 1 inch to 2 inches | 18 |
| Outlet over 2 inch to 3 inches | 24 |
| Outlet over 3 inch to 4 inches | 30] |

[Plus one-half (1/2) of the cost of transportation of the commission representative between the office of the commission and the point of test.]

[(d) For meters of a size or capacity not shown herein, the commission will fix a suitable fee upon application.]

Section 22. [21.] Safety Program. Each utility shall adopt and execute a safety program, fitted to the size and type of its operations. As a minimum, the safety program shall:

(1) Require employees to use suitable tools and equipment in order that they may perform their work in a safe manner.

(2) Instruct employees in safe methods of performing their work.

(3) Instruct employees who, in the course of their work are subject to the hazard of electrical shock, asphyxiation or drowning, in accepted methods of artificial respiration.

Section 23. [22.] Inspection of Systems. (1) Each utility shall adopt procedures for inspection to assure safe and adequate operation of its facilities and compliance with commission rules. These procedures must be approved by [shall be filed with] the commission.

(2) Each electric utility shall make systematic inspections of its system in the manner set out below for the purpose of insuring that the commission's safety requirements are being met. Such inspections shall be made as often as necessary but in no event less frequently than is set forth below for various classes of facilities and types of inspection.

(a) At intervals not to exceed six (6) months:

1. Production facilities regularly operated and manned; continuous surveillance, monitoring and inspection as a part of operating procedure.

2. Unmanned production facilities including peaking units not on standby status; units shall be operated and inspected and all monitoring devices shall be checked to determine that there is no evidence of abnormality.

3. Substations where the primary voltage is sixty-nine (69) KV or greater; examination for the purpose of discovering damage to or deterioration of components including structures and fences; checking of all gauges and monitoring devices.

4. Underground network transformers and network protectors in vaults located in buildings or under sidewalks, examination for leaks, condition of case, connections, temperature and overloading.

5. Electric lines operating at sixty-nine (69) KV or greater (including insulators, conductors, and supporting facilities).

(b) At intervals not to exceed one (1) year:

1. Production facilities maintained on a standby status; also inspection and examination prior to any start up, except remotely controlled facilities.

2. Substations where the primary voltage is less than sixty-nine (69) KV but is fifteen (15) KV or greater.

(c) At intervals not to exceed two (2) years: Electric lines operating at voltages of less than sixty-nine (69) KV (including insulators, conductors and supporting facilities).

(d) Other facilities:

1. Utility buildings inspected for compliance with safety codes at intervals not greater than one (1) year.

2. Construction equipment inspected for defects, wear and operational hazards at intervals not greater than quarterly.

(e) On the receipt of a report of a potentially hazardous condition made by a qualified employee or public official or by a customer, all portions of the system (including those listed above) which are the subject of the report.

(f) Appropriate records shall be kept by each utility to identify the inspections made, deficiencies found and action taken to correct such deficiencies.

(3) Each gas utility shall make systematic inspections of its system for the purpose of insuring that the commission's safety requirements are being met. Such inspections shall be made as often as necessary but in no event less frequently than is prescribed or recommended by the Department of Transportation, Part 192 Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards, for the various classes of facilities as defined in said standards, in accordance with the inspection procedures described therein.

(4) The following maximum time intervals are prescribed for certain inspections provided for in 49 CFR Part 192 Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards, with respect to which intervals are not specified and for certain additional inspections not provided for in such code.

(a) At intervals not to exceed one (1) year:

1. Production wells, storage wells and well equipment; visual inspection and examination of all exterior components.

2. Pressure limiting stations, relief devices and pressure regulating stations, including vaults.

3. The curb box on service line shall be inspected for accessibility.

(b) Other facilities:

1. Utility buildings inspected for compliance with safety codes at least annually.

2. Construction equipment under the control of the utility inspected for defects, wear and operational hazards at least quarterly.

(c) At intervals not to exceed the periodic meter test intervals: individual residential customer service regulators, vents and relief valve vents shall be checked for satisfactory operation.

(d) At intervals not to exceed the periodic

meter test intervals: the curb box and valve on the service line shall be inspected for operable condition.

(e) On the receipt of a report of a potentially hazardous condition made by a qualified employee or public official or by a customer, all portions of the system (including those listed above) which are the subject of the report.

(f) Appropriate records shall be kept by each utility to identify the inspections made, deficiencies found and action taken to correct such deficiencies.

(5) (a) Each water utility shall make systematic inspections of its system in the manner set out below for the purpose of insuring that the commission's safety requirements are being met. Such inspections shall be made as often as necessary but in no event less frequently than is set forth below for various classes of facilities and types of inspection.

1. Source of supply:

a. Dams, physical and structural, annually.

b. Intake structures, physical and structural, annually.

c. Traveling screens, physical and structural and safety of operation, annually.

2. Purification:

a. Sedimentation basins filters and clear wells, physical and structural and safety of operation, annually.

b. Chemical feed equipment, for proper and safe operation, annually.

c. Pumping equipment including electric power wiring and controls, for proper and safe operation, annually.

d. Hydrants, for proper and safe operation, annually.

e. Utility buildings, inspection for compliance with safety codes, annually.

f. Construction equipment, inspection for defects, wear and operational hazards, quarterly.

g. Mains and valves, leaks, annually.

(b) On the receipt of a report of a potentially hazardous condition made by a qualified employee or public official or by a customer, all portions of the system (including those listed above) which are the subject of the report.

(c) Appropriate records shall be kept by each utility to identify the inspections made, deficiencies found and action taken to correct such deficiencies.

(6) (a) Each telephone utility shall make systematic inspections of its system in the manner set out below for the purpose of insuring that the commission's safety requirements are being met. Such inspections shall be made as often as necessary but in no event less frequently than is set forth below for various classes of facilities and types of inspection.

1. Aerial plant: Inspection for electrical hazards, proper clearance for electric facilities and climbing safety - Every two (2) years.

2. Underground plant: Inspection for presence of gas, proper clearance from electric facilities and safe working conditions - At least annually.

3. Utility-provided station equipment and connections: Inspection for external electrical hazards, damaged instruments or wiring, appropriate protection from lightning and safe location of equipment and wiring - When on customer's premises.

4. Utility buildings: Inspection for compliance with safety codes - At least annually.

5. Construction equipment: Inspection for defects, wear and operational hazards - At least quarterly.

(b) On the receipt of a report of a potentially hazardous condition made by a qualified employee or public official or by a customer, all portions of the system (including those listed above) which are the subject of the report.

(c) Appropriate records shall be kept by each utility to identify the inspections made, deficiencies found and action taken to correct such deficiencies.

Section 24. [23.] Reporting of Accidents, Property Damage or Loss of Service. Each utility shall notify the commission of any utility related accident which results in death or serious injury to any person or any other incident which has or may result in substantial property damage or loss of service. Prompt notice of fatal accidents shall be given to the commission by telephone or telegraph. A detailed written report shall be submitted to the commission within seven (7) days. Natural gas utilities shall report accidents in accordance with the provisions of 807 KAR 5:027.

Section 25. [24.] Deviations from Rules. In special cases, for good cause shown, the commission may permit deviations from these rules.

RICHARD D. HEMAN, JR., Chairman
MELVIN H. WILSON, Secretary

APPROVED BY AGENCY: November 14, 1985

FILED WITH AGENCY: November 14, 1985 at 4 p.m.

PUBLIC HEARING SCHEDULED: On October 22, 1985, the commission held a hearing on this identical regulation and permitted comments and briefs to be filed after the hearing. In order to give serious consideration to the numerous comments, testimony and briefs, the commission did not file an affirmative consideration statement within 15 days of the hearing as required by KRS 13A.280. As a result, the regulation must be repromulagated. A public hearing on this repromulgated regulation will beheld on December 23, 1985, at 9:30 a.m., EDT, in the Public Service Commission Hearing Room 1 on Schenkel Lane in Frankfort, Kentucky. Anyone interested in attending this hearing shall contact: Forest Skaggs, Secretary, Public Service Commission, P.O. Box 615, Frankfort, Kentucky 40602. The commission will incorporate by reference all comments, testimony and briefs previously filed through and including November 4, 1985, in Administrative Case No. 296 into the record of the hearing scheduled for December 23, 1985 and these need not be refiled.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Ellyn Elise Crutcher

(1) Type and number of entities affected: All utilities subject to PSC jurisdiction.

(a) Direct and indirect costs or savings to those affected:

1. First year: $25,000 (annual meter read), $50,000 (keeping records of 2 meter tests), $500 (reporting loss of service/accidents). SAVINGS: $100,000 (elimination of manual records). All costs discussed above.

2. Continuing costs or savings: All costs discussed above.
3. Additional factors increasing or decreasing costs (note any effects upon competition): No effects upon competition. It should be noted that this regulation contains a provision regarding cable TV pole attachments. Since the methodology for determining the rates for these attachments has already been litigated, the regulation in and of itself should not add any costs.
(b) Reporting and paperwork requirements: Detailed report after accident, loss of service or property damage.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: $500 (elimination of PSC fee for meter tests).
2. Continuing costs or savings: Same as above.
3. Additional factors increasing or decreasing costs: None
(b) Reporting and paperwork requirements: Minimal
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: Proposed amendments are designed to improve regulatory efficiency while maintaining public protection. Alternatives considered were contrary to this goal.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: N/A

Tiering:
Was tiering applied? Yes. Section 11(2) distinguishes major and minor utilities for purposes of having an employee available every day versus once a week to answer consumer questions and negotiate partial payment plans.

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 8:020. Policies and procedures for local health department operations.**

RELATES TO: KRS Chapter 212
PURSUANT TO: KRS 194.050, 211.090, 211.170, 211.180, 213.410
NECESSITY AND FUNCTION: KRS 211.170 directs the Cabinet for Human Resources to establish policies governing the activities of local health departments. This regulation adopts various manuals setting policies and standards for health departments.

Section 1. Local Health Policy Manual. The policies set forth in the October 15, 1985, edition of the "Local Health Policy Manual" governing the maintenance and operation of local health departments are hereby adopted by reference.

Section 2. Financial Management Manual. The policies set forth in the November [October] 15, 1985, edition of the "Financial Management Manual" governing the operation of the financial management systems used by local health departments are hereby adopted by reference.

Section 3. Patient Services Reporting System Manual. The policies set forth in the May 1, 1984, edition of the "Patient Services Reporting System Manual" governing the collection of patient health/medical services delivered by local health departments are hereby adopted by reference.

Section 4. Medical Records System Policy and Procedure Manual for Local Health Departments in Kentucky. The policies and procedures set forth in the May 1, 1984, edition of the "Medical Records System Policy and Procedure Manual for Local Health Departments in Kentucky" governing the development and maintenance of medical records in local health departments are hereby adopted by reference.

Section 5. Planning Manual for Local Health Departments. The policies set forth in the March, 1985, edition of the "Planning Manual for Local Health Departments" governing the annual program planning process and procedures of local health departments are hereby adopted by reference.

Section 6. Standards Manual for Local Health Departments. The policies set forth in the March, 1985, edition of the "Standards Manual for Local Health Departments" governing the programmatic operations of local health departments are hereby adopted by reference.

Section 7. Local Health Department Environmental Data System Operational Procedures for Weekly Environmental Activity Report, Sanitation Programs Information Formulator, and Local Health Annual Data Report. The policies set forth in the September, 1982, edition of the "Local Health Department Environmental Data System Operational Procedures for Weekly Environmental Activity Report, Sanitation Programs Information Formulator, and Local Health Annual Data Report" are hereby adopted by reference.

Section 8. On-Line Environmental Health Management Information System. The policies set forth in the February 14, 1984, edition of the "On-Line Environmental Health Management Information System" manual are hereby adopted by reference.

[Section 9. Consumer Product Safety Commission's Hazardous Substances Labeling Guide. The policies set forth in the May 25, 1979, edition of the "Consumer Product Safety Commission's Hazardous Substances Labeling Guide" are hereby adopted by reference.]

[Section 10. Consumer Product Safety Commission's In-Depth Investigations Manual. The policies set forth in the January 28, 1983, edition of the "Consumer Product Safety Commission's In-Depth Investigations Manual" are hereby adopted by reference.]

Section 9. [11.] MCH Maternity Manual. The policies set forth in the July 1, 1985, edition

of the "MCH Maternity Manual" governing the operation of the prenatal program conducted by local health departments are hereby adopted by reference.

Section 10. [12.] Sudden Infant Death Syndrome Program. The policies set forth in the January 1, 1985, edition of the "Sudden Infant Death Syndrome Program" manual governing the operation of the Sudden Infant Death Syndrome Program conducted by local health departments are hereby adopted by reference.

Section 11. [13.] Standards for Genetic Disease Testing, Counseling and Education Services Program. The policies set forth in the October 15, 1985, edition of the "Standards for Genetic Disease Testing, Counseling and Education Services Program" manual governing the operation of genetic disease testing and counseling clinics conducted by local health departments are hereby adopted by reference.

Section 12. [14.] Standards for Regional Pediatric Clinics. The policies set forth in the October 15, 1985, edition of the "Standards for Regional Pediatric Clinics" manual governing the operation of regional pediatric programs conducted by local health departments are hereby adopted by reference.

Section 13. [15.] Standards for Preventive Health Care in Children. The policies set forth in the May 11, 1984, edition of the "Standards for Preventive Health Care in Children" manual governing the operation of well child programs conducted by local health departments are hereby adopted by reference.

Section 14. [16.] Location of Manuals Referenced in This Regulation. A copy of each manual referenced in this regulation is on file in the Office of the Commissioner for Health Services, 275 East Main Street, Frankfort, Kentucky, and is open to public inspection.

Section 15. [17.] Summary of Amendment. (1) In relation to Section 2 relating to the Financial Management Manual strike pages 48, 85, and 89(a) undated and substitute in lieu thereof new pages 48 and 85 dated November 15, 1985. This revision updates the Uniform Percentage Payment Schedule to correspond to federal poverty income guidelines and requires fidelity bonding on all employees and board of health members who handle local health department funds. [1 of this regulation relating to the Local Health Policy Manual, revise LHP 400-17 "Tuition Assistance Program" by placing additional restrictions on tuition assistance funded with state/federal restricted funds. To obtain tuition assistance, the local health department employee will now be required to meet specific eligibility and utilization requirements, submit their request in accordance with established guidelines and complete one (1) month of employment, after completion of the course, for each semester hour of tuition paid by the local health department.]

(2) In relation to Sections 9 and 10 relating to the Consumer Product Safety Commissioner's Hazardous Substances Labeling Guide and the Consumer Product Safety Commission's In-Depth Investigations Manual. Local health departments no longer administer this program. Therefore, these two (2) manuals are obsolete and will not continue to be incorporated by reference in this regulation. [2 of this regulation relating to the Financial Management Manual strike pages 11-12, 13(b), 17-22 undated and substitute in lieu thereof new pages 11-12, 13(b), 17-22 dated October 15, 1985, revising the local health department chart of accounts and function codes to include additional classifications necessary for the proper completion of Home Health Program Medicare and Medicaid cost reports.]

[(3) In relation to Section 13 of this regulation relating to the Genetic Disease Testing, Counseling and Education Services Program Standards, this manual has been revised as follows:]

[(a) Update the list of satellite genetic clinic sites by deleting one (1) site (West Liberty, Appalachian Regional Hospital) and adding two (2) sites (Mt. Sterling, Montgomery County Health Center and Paintsville, Johnson County Health Center).]

[(b) Update Family Financial Participation Scale based on revised poverty guidelines published in the Federal Register.]

[(c) Update Patient Service Document codes to conform with the latest Medical Record System Policy and Procedure Manual.]

[(d) Update the Program Plan Standards to conform with the Local Health Standards Manual.]

[(e) Change funding source from federal categorical grant funding to Maternal and Child Health Division funding.]

[(4) In relation to Section 14 of this regulation relating to the Standards for Regional Pediatric Clinics, this manual has been revised in its entirety. Significant revisions include:]

[(a) The format has been modified for greater clarity.]

[(b) The names of several organizational units have been changed to be consistent with reorganizations which have occurred since the original manual was published.]

[(c) Children admitted for continuing regional pediatric services are now eligible for preventive health assessments through the Well Child Program.]

[(d) Reporting instructions have been updated to include the ICD-9 diagnostic coding and to delete the cost section on the MCH-247-Quarterly Patient Report.]

[(e) The policy for purchasing medications has been revised to require prior agreements with pharmacies, to be consistent with the current Financial Management Manual for local health departments.]

[(f) The policy for reimbursement for hospitalization has been updated in accordance with the current Medical Assistance Program inpatient rate.]

[(g) The Maternal and Child Health Audit Tool has been revised to reflect the standards revisions.]

[(h) The most recent federal poverty income guidelines published by the Department of Health and Human Services are incorporated by reference.]

C HERNANDEZ, M.D., M.P.H., Commissioner
E. AUSTIN, JR., Secretary
APPROVED BY AGENCY: October 31, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Department for Health

Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 E. Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS
(Section 2, Financial Management Manual)

Agency Contact Person: Phillip R. Spangler
(1) Type and number of entities affected: 47 Local Health Departments.
(a) Direct and indirect costs or savings to those affected: Nominal additional cost with the expanded bonding requirement.
1. First year: Nominal additional cost.
2. Continuing costs or savings: Nominal additional cost.
3. Additional factors increasing or decreasing costs (note any effects upon competition): None
(b) Reporting and paperwork requirements: No additional.
(2) Effects on the promulgating administrative body: None
(a) Direct and indirect costs or savings:
1. First year: Insignificant
2. Continuing costs or savings: Insignificant
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements:
(3) Assessment of anticipated effect on state and local revenues: State - None, Local - Insignificant.
(4) Assessment of alternative methods; reasons why alternatives were rejected: N/A
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? No. N/A.

REGULATORY IMPACT ANALYSIS
(Sections 9 & 10, Consumer Product Safety)

Agency Contact Person: Phillip R. Spangler
(1) Type and number of entities affected: None
(a) Direct and indirect costs or savings to those affected:
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements:
(2) Effects on the promulgating administrative body: None
(a) Direct and indirect costs or savings:
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements:
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: None
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments: The referenced manuals are obsolete as the program is now administered by a state agency rather than the Local Health Departments.

Tiering:
Was tiering applied? No. Not applicable.

CABINET FOR HUMAN RESOURCES
Department for Health Services
(Proposed Amendment)

902 KAR 100:005. General applicability.

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and to regulate the handling and disposal of radioactive waste. The purpose of this regulation is to specify the general applicability of the Cabinet for Human Resources' radiation regulations.

Section 1. General Applicability of State Radiation Regulations. The Cabinet for Human Resources' regulations relating to radiation are applicable to the possession and use of all sources of ionizing and electronic product radiation in Kentucky and to the handling and disposal of radioactive waste in Kentucky except where exclusive jurisdiction has been retained by the United States Nuclear Regulatory Commission pursuant to applicable federal laws and regulations. Nothing in the cabinet's radiation regulations shall be interpreted as limiting the exposure of patients to radiation by licensed state practitioners of the healing arts who are authorized by virtue of their license to use sources of radiation, or by qualified individuals acting under their direction. The classification and certification of operators of sources of radiation as provided by KRS 211.870, 211.890, and 211.993 are not included within the scope of these regulations.

[Section 2. Existing Licenses and Certificates. All licenses, registration certificates and other actions of the cabinet taken pursuant to previous State Board of Health regulations bearing the code letters "RAD" or "RH" shall continue in full force and effect subject to the provisions of the cabinet's current regulations relating to radiation.]

C HERNANDEZ, M.D., M.P.H., Commissioner
E. AUSTIN, JR. Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Department for Health

Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing. R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs (note any effects upon competition): NA
(b) Reporting and paperwork requirements: None required
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs: NA
(b) Reporting and paperwork requirements: None required
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: NA
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: NA
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 100:010. Definitions.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. The purpose of this regulation is to provide for definitions as applicable to other Cabinet for Human Resources radiation regulations.

Section 1. Definitions. As used in these regulations, these terms have the definitions set forth below:
(1) "$A_1$" and "$A_2$:"

(a) "$A_1$" means the maximum activity of special form radioactive material permitted in a Type A package;
(b) "$A_2$" means the maximum activity of radioactive material, other than special form radioactive material, permitted in a Type A package;
(c) These values are either listed in 902 KAR 100:070, Section 21, or may be derived in accordance with the procedure prescribed in 902 KAR 100:070, Section 20.

(2) [(1)] "Accelerator" means any machine capable of accelerating electrons, protons, deuterons, [and helium ions,] or other charged particles in a vacuum[,] and of discharging the resultant particulate[,] or other radiation into a medium at energies usually in excess of one (1) MeV. It includes, but is not limited to, the cyclotron, synchrotron, synchrocyclotron, betatron, linear accelerator, and Van de Graaff electrostatic generator.

(3) [(2)] "Accessible surface" means the external surface of the enclosure or housing provided by the manufacturer.

(4) [(3)] "Act" means KRS 211.842 to 211.852 [152.105 to 152.190 relating to nuclear energy, ionizing and electronic product radiation].

(5) [(4)] "Agreement state" means any state with which the United States Nuclear Regulatory Commission or the United States Atomic Energy Commission has entered into an effective agreement under subsection [Section] 274 b. of the Atomic Energy Act of 1954, as amended (73 Stat. 689).

(6) [(5)] "Airborne radioactive material" means any radioactive material dispersed in the air in the form of dusts, fumes, mists, vapors, or gases.

(7) [(6)] "Airborne radioactivity area" means:
(a) Any room, enclosure, or operating area in which airborne radioactive material exists in concentrations in excess of the amounts specified in Table 1, Column 1, of 902 KAR 100:025[, listing the concentrations in air and water above natural background]; or
(b) Any room, enclosure, or operating area in which airborne radioactive material exists in concentrations which, averaged over the number of hours in any week during which individuals are in the area, exceed twenty-five (25) percent of the amounts specified in Table I, Column 1, of 902 KAR 100:025[, listing the concentrations in air and water above natural background].

(8) [(7)] "Aluminum equivalent" means the thickness of aluminum affording the same attenuation, under specified conditions, as the material in question.

(9) [(8)] "Analytical x-ray systems" means any system which utilizes x-rays for the examination of the structure of materials. This includes, but is not limited to, all types of x-ray diffraction and spectographic equipment.

(10) [(9)] "As low as reasonably achievable (ALARA) [far below the limits specified in this regulation as practicable]" means as low as is reasonably [practicably] achievable taking into account the state of technology, and the economics of improvement in relation to benefits to the public health and safety and in relation to the utilization of atomic energy in the public interest.

(11) [(10)] "Attenuation" means the reduction of exposure rate upon passages of radiation through matter.

(12) [(11)] "Attenuation block" means a block

or stack, having dimensions twenty (20) cm by twenty (20) cm by three and eight-tenths (3.8) cm, of type 1100 aluminum alloy or other materials having equivalent attenuation.

(13) [(12)] "Beam limiting device" (collimator) means a device which provides a means to restrict the dimensions of the x-ray field.

(14) "Brachytherapy" means a method of radiation therapy in which an encapsulated source or group of sources is utilized to deliver beta or gamma radiation at a distance of up to a few centimeters, by surface, intracavitary, or interstitial application.

(15) "Broker" (waste broker) means any person who takes possession of low-level waste solely for the purposes of consolidation and shipment.

(16) [(13)] "Byproduct material" means:

(a) 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 material; and

(b) The tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

(17) "Cabinet" means Cabinet for Human Resources, or its duly authorized representatives.

(18) [(14)] "Cabinet x-ray systems" means an x-ray system with the x-ray tube installed or used in a permanent enclosure in which the enclosure is intended to contain at least that portion of the material being irradiated. The enclosure may be the architectural structure or may be independent of the architectural structure, but in either case, the structure of the enclosure must provide attenuation of the radiation to meet the requirements of 902 KAR 100:105, relating to the possession, use, and operation of x-ray systems, and must exclude personnel from its interior during the generation of x-radiation. This definition does not include x-ray systems used by licensed practitioners of the healing arts.

(19) [(15)] "Calendar quarter" means not less than twelve (12) consecutive weeks nor more than fourteen (14) consecutive weeks. The first calendar quarter of each year shall begin in January and subsequent calendar quarters shall be so arranged so [such] that no day is included in more than one (1) calendar quarter and no day in any one (1) year is [or] omitted from inclusion within a calendar quarter. No licensee or registrant shall change the method observed by him of determining calendar quarters for purposes of these regulations except at the beginning of a calendar year.

(20) "Calibration" means the determination of:

(a) The response or reading of an instrument relative to a series of known radiation values over the range of the instrument; or

(b) The strength of a source of radiation relative to a standard.

(21) "Carrier" means a person engaged in the transportation of passengers or property by land or water as a common, contract, or private carrier, or by civil aircraft.

(22) [(16)] "Certified components" means components of x-ray systems which are subject to regulations promulgated under P.L. 90-602.

(23) [(17)] "Certified system" means any x-ray system which has one (1) or more certified component(s).

(24) "CFR" means Code of Federal Regulations.

(25) [(18)] "Control panel" means that part of the x-ray control upon which are mounted the switches, knobs, push buttons, and other hardware necessary for manually setting the technique factors.

(26) [(19)] "Cooling curve" means the graphical relationship between heat units stored and cooling time.

(27) [(20)] "Curie [(Ci)]" means a quantity [the unit] of radioactivity. One (1) curie (Ci) is that quantity of radioactive material which decays at the [activity corresponding to a] rate of 3.7 x $10^{10}$ [E 10] disintegrations per second (dps). Commonly used submultiples of the curie are the millicurie and the microcurie. One (1) millicurie (mCi) = 0.001 curie = 3.7 x $10^{7}$ dps. One (1) microcurie (uCi) = 0.000001 curie = 3.7 x $10^{4}$ dps. [2.2 E 12 disintegrations per minute (dpm), except for purposes of these regulations, 6,615 pounds of natural uranium or 19,850 pounds of natural thorium shall be considered equivalent to one (1) curie. A commonly used sub-multiple of the curie is the microcurie (uCi). One (1) uCi 0.000001 Ci 2.2 E 6 dpm. ("E" means exponent. For example, 2.2 E 6 means 2.2 times ten (10) to the sixth power.) For purposes of these regulations, it may be assumed that the daughter activity concentrations in the following table are equivalent to an air concentration of E -7 microcuries of Radon 222 per milliliter of air in equilibrium with the daughters Polonium 218, Lead 214, Bismuth 214, and Polonium 214:]

[Alpha-Emitting Daughter Activity Collected Per Milliliter of Air

| Maximum Time Between Collection and Measurement (hours)* | Microcuries/ml | Total Alpha Disintegrations Per Minute Per ml |
|---|---|---|
| 0.5 | 7.2 E -8 | 0.16 |
| 1.0 | 4.5 E -8 | 0.10 |
| 2.0 | 1.3 E -8 | 0.028 |
| 3.0 | 0.3 E -8 | 0.0072 |

]

[*The duration of sample collection and the duration of measurement should be sufficiently short compared to the time between collection and measurement, as not to have a statistically significant effect upon the results.]

(28) [(21)] "Deadman switch" means a switch so constructed that a circuit closing contact can be maintained only by continuous pressure on the switch by the operator.

[(22) "Cabinet" means Cabinet for Human Resources, or its duly authorized representatives.]

(29) "Depleted uranium" means the source material uranium in which the isotope uranium-235 is less than 0.711 weight percent of the total uranium present. Depleted uranium does not include special nuclear material.

(30) [(23)] "Diagnostic source assembly" means the tube housing assembly with a beam-limiting device attached.

(31) [(24)] "Diagnostic-type protective tube housing" means an x-ray tube housing so constructed that the leakage radiation measured at a distance of one (1) meter from the source cannot exceed 100 milliroentgens in one (1) hour

when the tube is operated at its maximum continuous rated current for the maximum tube potential.

(32) [(25)] "Direct scatter radiation" means that scattered radiation which has been deviated in direction only by materials irradiated by the useful beam. (See also "scattered radiation").

(33) "Disposal" means the disposition of waste as authorized by 902 KAR 100:021.

(34) [(26)] "Dose" means absorbed dose or dose equivalent as appropriate:

(a) "Absorbed dose" is the energy imparted to matter by ionizing radiation per unit mass of irradiated material at the place of interest. The special unit of absorbed dose is the rad (see "Rad").

(b) "Dose equivalent" is a quantity that expresses on a common scale for all radiation a measure of the postulated effect on a given organ. It is defined as the absorbed dose in rads times certain modifying factors. The unit of dose equivalent is the rem (see "Rem"). [the quantity of radiation absorbed, per unit of mass, by the body or by any portion of the body. When these regulations specify a dose during a period of time, the dose means the total quantity of radiation absorbed, per unit of mass, by the body or by any portion of the body during such period of time. Several different units of dose are in current use. (See "Rad" and "Rem.")]

(35) "Dose commitment" means the total radiation dose to a part of the body that will result from retention in the body of radioactive material. For purposes of estimating the dose commitment, it is assumed that from the time of intake the period of exposure to retained material will not exceed fifty (50) years.

(36) [(27)] "Entrance exposure rate" means the roentgens per unit time at the point where the center of the useful beam enters the patient.

(37) "Exclusive use" (also referred to in other regulations as "sole use" or "full load") means the sole use of a conveyance by a single consignor and for which all initial, intermediate, and final loading and unloading are carried out in accordance with the direction of the consignor or consignee.

(38) [(28)] "Exposure" means the quotient of dQ by dm where dQ is the absolute value of the total charge of the ions of one (1) sign produced in air when all the electrons (negatons and positrons) liberated by photons in a volume element of air having mass dm are completely stopped in air. (The special unit of exposure is the roentgen (R).) Exposure also means one (1) or more irradiations of a person for a healing arts purpose.

(39) "Exposure rate" means the exposure per unit of time, such as roentgen per minute and milliroentgen per hour.

(40) "Field station" means a facility where radioactive sources may be stored or used and from which equipment is dispatched to temporary jobsites.

(41) [(29)] "Filter" is the material in the useful beam which usually absorbs preferentially the less penetrating radiations.

(a) "Inherent filtration" means the filter permanently in the useful beam. It includes the window of the x-ray tube and any permanent tube enclosure.

(b) "Added filter" means the filter added to the inherent filtration.

(c) "Total filter" means the sum of the inherent and added filters.

(42) "Fissile material" means any special nuclear material consisting of or containing one (1) or more fissile radionuclides. Fissile radionuclides are plutonium-238, plutonium-239, plutonium-241, uranium-233, and uranium-235. Neither natural or depleted uranium is fissile material. (Cabinet jurisdiction extends only to special nuclear material if quantities are not sufficient to form a critical mass as defined in this regulation.)

(a) Fissile Class I: A package which may be transported in unlimited numbers and in any arrangement, and which requires no nuclear criticality safety controls during transportation. A transport index is not assigned for purposes of nuclear criticality safety but may be required because of external radiation levels.

(b) Fissile Class II: A package which may be transported together with other packages in any arrangement but, for criticality control, in numbers which do not exceed an aggregate transport index of fifty (50). These shipments require no other nuclear criticality safety control during transportation. Individual packages may have a transport index not less than 0.1 and not more than ten (10).

(43) [(30)] "Fluoroscopic imaging assembly" means a component which comprises a reception system in which x-ray photons produce a fluoroscopic image. It includes equipment housings, electrical interlocks if any, the primary protective barrier, and structural material providing linkage between the image receptor and the diagnostic source assembly.

(44) "Former U.S. Atomic Energy Commission (AEC) or U.S. Nuclear Regulatory Commission (NRC) licensed facilities" means nuclear reactors, nuclear fuel reprocessing plants, uranium enrichment plants, or critical mass experimental facilities where AEC or NRC licenses have been terminated.

(45) "Generator" (waste generator) means any person who produces or possesses low-level radioactive waste in the course of or incident to manufacturing, power generation, processing, medical diagnosis and treatment, research, education or other activity.

(46) [(31)] "Half-value layer (HVL)" means the thickness of specified material which attenuates the beam of radiation to an extent such that the exposure rate is reduced to one-half (1/2) of its original value. In this definition the contribution of all scattered radiation, other than any which might be present initially in the beam concerned, is deemed to be excluded.

(47) [(32)] "High radiation area" means any area, accessible to individuals, in which there exists radiation at such levels that a major portion of the body could receive in any one (1) hour a dose in excess of 100 millirems.

(48) [(33)] "Human use" means the internal or external administration of radiation or radioactive materials to human beings.

(49) [(34)] "Image intensifier" means a device which converts instantaneously by means of photoemissive surfaces and electronic circuitry an x-ray pattern into a light pattern of greater intensity than would have been produced by the original x-ray pattern.

(50) [(35)] "Image receptor" means any device such as a fluorescent screen or radiographic film which transforms incident radiation either into a visual image or into another form which

can be made into a visual image by further transformations.

(51) [(36)] "Individual" means any human being.

(52) [(37)] "Industrial radiography" means the examination of the macroscopic structure of materials by nondestructive methods utilizing sources of radiation.

(53) "Injection tool" means a device used for controlled subsurface injection of radioactive tracer material.

(54) "Inspection" means an examination or observation including but not limited to, tests, surveys, and monitoring to determine compliance with rules, regulations, orders, and requirements of the cabinet.

(55) [(38)] "Interlock" means a device arranged or connected such that the occurrence of an event or condition is required before a second event or condition can occur or continue to occur [for precluding access to an area of radiation hazard by automatically eliminating the hazard upon entry by personnel or parts of their body].

(56) [(39)] "Kilovolt peak (kVp)" means the crest value in kilovolts of the potential difference of a pulsating potential generator. When only one-half (1/2) of the wave is used, the value refers to the useful half of the wave.

(57) [(40)] "Lead equivalent" means the thickness of lead affording the same attenuation, under specified conditions, as the material in question.

(58) [(41)] "Leakage technique factors" means the technique factors associated with the tube housing assembly which are used in measuring leakage radiation. They are defined as follows:

(a) For capacitor energy storage equipment, the maximum rated number of exposures in an hour for operation at the maximum rated peak tube potential with the quantity of charge per exposure being ten (10) milliampere seconds [millicoulombs] (mAs) or the minimum obtainable from the unit, whichever is larger.

(b) For field emission equipment rated for pulsed operation, the maximum rated number of x-ray pulses in an hour for operation at the maximum rated peak tube potential.

(c) For all other equipment, the maximum rated continuous tube current for the maximum rated peak tube potential.

(59) [(42)] "License" means a license issued by the cabinet in accordance with [under] these regulations.

(60) [(43)] "Licensed material" means radioactive material received, possessed, used, or transferred under a general or specific license issued by the cabinet pursuant to these regulations.

(61) [(44)] "Licensee" means any person who is licensed by the cabinet in accordance with these regulations and the Act [the holder of such license].

(62) "Logging supervisor" means the individual who provides personal supervision of the utilization of sources of radiation at the well site.

(63) "Logging tool" means a device used subsurface to perform well-logging.

(64) "Low specific activity material" means any of the following:

(a) Uranium or thorium ores and physical or chemical concentrates of those ores;

(b) Unirradiated natural or depleted uranium or unirradiated natural thorium;

(c) Tritium oxide in aqueous solutions provided the concentration does not exceed five (5.0) millicuries per milliliter;

(d) Material in which the radioactivity is essentially uniformly distributed and in which the estimated average concentration per gram of contents does not exceed:

1. 0.0001 millicurie of radionuclides for which the $A_2$ quantity in 902 KAR 100:070 is not more than 0.05 curie;

2. 0.005 millicurie of radionuclides for which the $A_2$ quantity in 902 KAR 100:070 is more than 0.05 curie, but not more than one (1) curie; or

3. 0.3 millicurie of radionuclides for which the $A_2$ quantity in 902 KAR 100:070 is more than one (1) curie.

(e) Objects of nonradioactive material externally contaminated with radioactive material, provided that the radioactive material is not readily dispersible and the surface contamination, when averaged over an area of one (1) square meter, does not exceed 0.0001 millicurie (220,000 disintegrations per minute) per square centimeter of radionuclides for which the $A_2$ quantity in 902 KAR 100:070 is not more than 0.05 curie, or 0.001 millicurie (2,200,000 disintegrations per minute) per square centimeter for other radionuclides.

(65) "Low-level radioactive waste" means radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel or byproduct material as defined in Section 11e(2) of the Atomic Energy Act of 1954 (42 U.S.C. 2014).

(66) [(45)] "Microscopic analytical x-ray equipment" means any device which utilizes x-rays for examining the microscopic structure of materials. This includes all types of x-ray diffraction and spectographic equipment.

(67) "Mineral logging" means any logging performed for the purpose of mineral exploration other than oil or gas.

(68) [(46)] "Occupational dose" means exposure of an individual to radiation:

(a) In a restrictive area; or

(b) In the course of employment in which the individual's duties involve exposure to radiation; provided, that occupational dose shall not be deemed to include any exposure of an individual to radiation for the purpose of medical diagnosis or medical therapy of such individual.

(69) "Normal form radioactive material" means radioactive material which has not been demonstrated to qualify as "special form radioactive material."

(70) [(47)] "Operating procedures" means detailed written instructions including but not limited to the normal operation of equipment and movable shielding, closing of interlock circuits, manipulation of controls, radiation monitoring procedures for personnel and areas, testing of interlocks, and recordkeeping requirements.

(71) "Package" means the packaging together with its radioactive contents as presented for transport.

(72) "Packaging" means the assembly of components necessary to ensure compliance with the packaging requirements of 902 KAR 100:070. It may consist of one (1) or more receptacles, absorbent materials, spacing structures, thermal insulation, radiation shielding, and devices for cooling or absorbing mechanical shocks. The vehicle, tie-down system, and auxiliary

equipment may be designated as part of the packaging.

(73) [(48)] "Peak tube potential" means the maximum value of the potential difference across the x-ray tube during an exposure.

(74) "Permanent radiographic installation" means an installation or structure designed or intended for radiography and in which radiography is regularly performed.

(75) [(49)] "Person" means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group agency, political subdivision of this state or any other state, or political subdivision or agency thereof, and any legal successor, representative, agent or agency of the foregoing.

(76) "Personal supervision" means guidance and instruction by the supervisor who is physically present at the jobsite and watching the performance of the operation in such proximity that contact can be maintained and immediate assistance given as required.

(77) [(50)] "Personnel monitoring equipment" means a device[s] designed to be worn or carried by an individual for the purpose of estimating [measuring] the dose received by the individual (e.g., film badges, [pocket chambers,] pocket dosimeters, and thermoluminescent dosimeters (TLD) [film rings, etc.)].

(78) [(51)] "Physician" means an individual licensed to practice medicine or osteopathy in this state.

(79) [(52)] "Protective apron" means an apron made of radiation absorbing materials of at least 0.25 mm lead equivalency. This requirement may be assumed to have been met if the HVL of the apron is not less than 0.25 mm lead at normal operating voltages.

(80) [(53)] "Protective barrier" means a barrier of radiation absorbing material(s) used to reduce radiation exposure.

(a) "Primary protective barrier" means a barrier sufficient to attenuate the useful beam to the required degree.

(b) "Secondary protective barrier" means a barrier sufficient to attenuate the stray radiation to the required degree.

(81) [(54)] "Protective glove" means a glove made of radiation absorbing materials of at least 0.25 mm lead equivalency. This requirement may be assumed to have been met if the HVL of the glove is not less than 0.25 mm lead at normal operating voltages.

(82) [(55)] "Qualified expert" means an individual who has demonstrated to the satisfaction of the cabinet that he possesses the knowledge and training to measure ionizing radiation, to evaluate safety techniques, and to advise regarding radiation protection needs.

(83) [(56)] "Rad" means the special unit of absorbed dose. One (1) rad equals one-hundredth (0.01) joule per kilogram of material; for example, if tissue is the material of interest, then one (1) rad equals 100 ergs per gram of tissue. [measure of the dose of any radiation to body tissues in terms of the energy absorbed per unit mass of the tissue. One (1) rad is the dose corresponding to the absorption of 100 ergs per gram of tissue. (One (1) millirad - mrad - equals 0.001 rad.)]

(84) [(57)] "Radiation" means ionizing radiation which includes any or all of the following: [, i.e.,] gamma rays and x-rays, alpha and beta particles, high speed electrons, neutrons, high-speed protons, and other atomic [nuclear] particles. This definition does not include non-ionizing radiations such as sound, microwave, radiowave, or visible, infra-red, or ultraviolet light.

(a) "Leakage radiation" means all radiation coming from within the tube or source housing except the useful beam.

(b) "Scattered radiation" means radiation that, during passage through matter, has been deviated in direction. It may also have been modified by a decrease in energy.

(c) "Useful radiation" means radiation which passes through the window, aperture, cone, or other beam limiting device of the tube or source housing. Sometimes called "primary beam."

(d) "Stray radiation" means the sum of leakage and scattered radiation.

(85) [(58)] "Radiation area" means any area, accessible to individuals, in which there exists radiation at such levels that a major portion of the body could receive in any one (1) hour a dose in excess of five (5) millirems, or in any five (5) consecutive days a dose in excess of 100 millirems.

(86) [(59)] "Radiation machine" means any device capable of producing radiation except devices which produce radiation only from radioactive material.

(87) [(60)] "Radiation safety officer" means one who has the knowledge and responsibility to apply appropriate radiation protection regulations [a person directly responsible for radiation protection].

(88) "Radioactive marker" means radioactive material placed subsurface or on a structure intended for subsurface use for the purpose of depth determination or direction orientation.

(89) [(61)] "Radioactive material" means any [material,] solid, liquid, or gas, which emits radiation spontaneously.

(90) "Radioactivity" means the disintegration of unstable atomic nuclei by the emission of radiation.

(91) [(62)] "Radiographer" means any individual who performs or who, in attendance at the site where sources of radiation are being used, personally supervises industrial radiographic operations and who is responsible to the licensee or registrant for assuring compliance with the requirements of these regulations and all license conditions.

(92) [(63)] "Radiographer's assistant" means any individual who, under the personal supervision of a radiographer, uses sources of radiation, related handling tools, or survey instruments in industrial radiography.

(93) [(64)] "Radiographic exposure device" means any instrument containing a sealed source fastened or contained therein, in which the sealed source or shielding thereof may be moved, or otherwise changed, from a shielded to unshielded position for purposes of making a radiographic exposure.

(94) "Registrant" means any person who is registered with the cabinet and is legally obligated to register with the cabinet pursuant to these regulations.

(95) "Registration" means registration with the cabinet in accordance with these regulations.

(96) "Regulations of the U.S. Department of Transportation" means the regulations in 49 CFR Parts 100-189.

(97) [(65)] "Rem" means a special unit of dose equivalent. One (1) millirem (mrem) = 0.001 rem.

[the measure of the dose of any radiation to body tissue in terms of its estimated biological effect relative to a dose of one (1) roentgen (R) of x-rays. (One (1) millirem - mrem - equals 0.001 rem. The relation of the rem to other dose units depends upon the biological effect under consideration and upon the conditions of irradiation.] For the purposes of these regulations, any of the following is considered to be equal to [equivalent to a dose of] one (1) rem:

(a) An exposure [A dose] of one (1) roentgen [R] due to x or gamma radiation;

(b) An absorbed [A] dose of one (1) rad due to x, gamma, or beta radiation;

(c) An absorbed [A] dose of 0.05 [0.1] rad due to particles heavier than protons and with sufficient energy to reach the lens of the eye [neutrons or high energy protons];

(d) An absorbed [A] dose of 0.1 [0.05] rad due to neutrons or high energy protons [particles heavier than protons and with sufficient energy to reach the lens of the eye]. If it is more convenient to measure the neutron flux, or equivalent, than to determine the neutron dose in rads[, as provided in paragraph (c) of this subsection], one (1) rem of neutron radiation may, for purposes of these regulations, be assumed to be equivalent to fourteen (14) million neutrons per square centimeter incident upon the body; or, if there exists sufficient information to estimate with reasonable accuracy the approximate distribution in energy of the neutrons, the incident number of neutrons per square centimeter equivalent to one (1) rem may be estimated from the following table:

Neutron Flux Dose Equivalence

| Neutron energy (MeV) | Number of neutrons Average flux to per square centimeter for a dose equivalent [to a dose] of 1 rem (neutrons/square cm) | deliver 100 mrem in 40 hrs. (neutrons/square cm per second) |
|---|---|---|
| Thermal | 970 x $10^6$ [E 6*] | 670 |
| 0.0001 | 720 x $10^6$ [E 6] | 500 |
| 0.005 | 820 x $10^6$ [E 6] | 570 |
| 0.02 | 400 x $10^6$ [E 6] | 280 |
| 0.1 | 120 x $10^6$ [E 6] | 80 |
| 0.5 | 43 x $10^6$ [E 6] | 30 |
| 1.0 | 26 x $10^6$ [E 6] | 18 |
| 2.5 | 29 x $10^6$ [E 6] | 20 |
| 5.0 | 26 x $10^6$ [E 6] | 18 |
| 7.5 | 24 x $10^6$ [E 6] | 17 |
| 10.0 | 24 x $10^6$ [E 6] | 17 |
| 10 to 30 | 14 x $10^6$ [E 6] | 10 |

[*"E" represents an exponent. For example, 970 E 6 means 970 times ten to the sixth power.]

(98) [(66)] "Research and development" means:

(a) Theoretical analysis, exploration, or experimentation; or

(b) The extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes. Research and development does not include the internal or external administration of radiation or radioactive material to human beings.

(99) [(67)] "Restricted area [(controlled)]" means any area access to which is controlled by the licensee or registrant for purposes of protection of individuals from exposure to radiation and radioactive materials. A restricted area ["Restricted area"] shall not include any areas used as [for] residential quarters, although a separate room or rooms in a residential building may be set apart as a restricted area.

(100) [(68)] "Roentgen [(R)]" means the special [a] unit of exposure [to radiation]. One (1) roentgen (R) equals 2.58 x $10^{-4}$ coulombs per kilogram of air (see "Exposure"). [It is the amount of gamma or x-rays required to produce ions carrying one (1) electrostatic unit of electrical charge in one (1) cubic centimeter of dry air under standard conditions. (For determining exposures to x- or gamma rays up to three (3) MeV, the dose limits specified in 902 KAR 100:020, relating to standards for protection against radiation, may be assumed to be equivalent to the "air dose." (For the purpose of these regulations, the "air dose" means the dose measured by a properly calibrated appropriate instrument in air at or near the body surface in the region of highest dose rate.)]

(101) [(69)] "Sealed source" means radioactive material that is permanently bonded or fixed in a capsule or matrix designed to prevent leakage or escape [release and dispersal] of the radioactive material [under the most severe conditions which are likely to be encountered in normal use and handling].

(102) [(70)] "Secretary" means the Secretary of the Cabinet for Human Resources.

(103) "Shielded position" means the location within the radiographic exposure device or storage container which, by manufacturer's design, is the proper location for storage of the sealed source.

(104) "Source changer" means a device designed and used for replacement of sealed sources in radiographic exposure devices, including those source changers also used for transporting and storage of sealed sources.

(105) "Source holder" means a housing or assembly into which a radioactive source is placed for the purpose of facilitating the handling and use of the source.

(106) [(71)] "Source image receptor distance (SID)" means the distance from the source to the center of the input surface of the image receptor.

(107) [(72)] "Source material" means:

(a) Uranium or thorium, or any combination thereof, in any physical or chemical form; or

(b) Ores which contain by weight one-twentieth (1/20) of one (1) percent (0.05 percent) or more of:

1. Uranium;
2. Thorium; or
3. Any combination thereof.

(c) Source material does not include special nuclear material.

(108) [(73)] "Source of radiation" means any radioactive material[,] or any device or equipment emitting or capable of producing radiation.

(109) [(74)] "Special form" means radioactive material which satisfies the following conditions:

(a) It is either a single solid piece or is contained in a sealed capsule that can be opened

only by destroying the capsule;

(b) The piece or capsule has at least one (1) dimension not less than five (5) millimeters (0.197 inch); and

(c) It satisfies the test requirements specified by the U.S. Nuclear Regulatory Commission (NRC). A special form encapsulation designed in accordance with the NRC requirements in effect on June 30, 1983 and constructed prior to July 1, 1985 may continue to be used. A special form encapsulation either designed or constructed after June 30, 1985 must meet requirements of this definition applicable at the time of its design or construction. [any of the following physical forms of licensed material of any transport group:]

[(a) The material is in solid form having no dimension less than five-tenths (0.5) millimeter or at least one (1) dimension greater than five (5) millimeters; does not melt, sublime, or ignite in air at a temperature of 1,000 degrees Fahrenheit; will not shatter or crumble if subjected to the percussion test described in these regulations; and is not dissolved or converted into dispersible form to the extent of more than 0.005 percent by weight by immersion for one (1) week in water at sixty-eight (68) degrees Fahrenheit or in air at eighty-six (86) degrees Fahrenheit; or]

[(b) The material is securely contained in a capsule having no dimension less than five-tenths (0.5) millimeter or at least one (1) dimension greater than five (5) millimeters, which will retain its contents if subjected to the tests prescribed in these regulations; and which is constructed of materials which do not melt, sublime, or ignite in air at 1,475 degrees Fahrenheit, and do not dissolve or convert into dispersible form to the extent of more than 0.005 percent by weight by immersion for one (1) week in water at sixty-eight (68) degrees Fahrenheit or in air at eighty-six (86) degrees Fahrenheit.]

(110) [(75)] "Special nuclear material" means:

(a) Plutonium, uranium 233, uranium enriched in the isotope U-233 or in the isotope U-235, and any other material which the Governor declares by order to be special nuclear material after the United States Nuclear Regulatory [Atomic Energy] Commission, or any successor thereto, has determined the material to be such, but does not include source material; or

(b) Any material artificially enriched by any of the foregoing, but does not include source material.

(111) [(76)] "Special nuclear material in quantities not sufficient to form a critical mass" means uranium enriched in the isotope U-235 in quantities not exceeding 350 grams of contained U-235; [,] U-233 in quantities not exceeding 200 grams; plutonium in quantities not exceeding 200 grams; or any combination of them in accordance with the following formula; [.] For each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified above for the same kind of special nuclear material. The sum of such ratios for all of the kinds of special nuclear material in combination shall not exceed one (1). For example, the following quantities in combination would not exceed the limitation and are within the formula:

$$\frac{\text{175 (grams contained U-235)}}{350} +$$

$$\frac{\text{50 (grams U-233)}}{200} + \frac{\text{50 (grams Pu)}}{200} = 1$$

(112) "Specific activity" means the radioactivity of the radionuclide per unit mass of that nuclide. The specific activity of a material in which the radionuclide is essentially uniformly distributed is the radioactivity per unit mass of the material.

(113) [(77)] "Spot film" means a radiograph which is made during a fluoroscopic examination to permanently record conditions which exist during that fluoroscopic procedure.

(114) "Storage" (waste storage) means the holding of waste for treatment or disposal for a period of twenty-four (24) hours or more.

(115) [(78)] "Storage container" means a device in which sealed sources are transported or stored.

(116) "Subsurface tracer study" means the release of a substance tagged with radioactive material for the purpose of tracing the movement or position of the tagged substance in the well-bore or adjacent formation.

(117) [(79)] "Survey" means an evaluation of the [radiation hazards incident to the] production, use, release, disposal, or presence of sources of radiation under a specific set of conditions to determine actual or potential radiation hazards. When appropriate, such evaluation includes, but is not limited to, tests, physical examinations, [a physical survey of the location of materials and equipment,] and measurements of levels of radiation or concentrations of radioactive material present.

(118) [(80)] "Technique factors" means the conditions of operation. They are specified as follows:

(a) For capacitor energy storage equipment peak tube potential in kV and quantity of charge in mAs.

(b) For field emission equipment rated for pulsed operation, peak tube potential in kV and number of x-ray pulses.

(c) For all other equipment, peak tube potential in kV and either tube current in mA and exposure time in seconds, or the product of tube current and exposure time in mAs.

(119) "Teletherapy" means therapeutic irradiation in which the source of radiation is at a distance from the body.

(120) "Temporary jobsite" means a location to which radioactive material has been dispatched to perform a job, operation, or study.

(121) "Tests" means the process of verifying compliance with an applicable regulation.

(122) [(81)] "Therapeutic-type protective tube housing" means:

(a) For x-ray therapy equipment not capable of operating at 500 kVp or above, the following definition applies: An x-ray tube housing so constructed that the leakage radiation at a distance of one (1) meter from the target does not exceed one (1) roentgen in one (1) hour when the tube is operated at its maximum rated tube potential;

(b) For x-ray therapy equipment capable of operating at 500 kVp or above, the following definition applies: An x-ray tube housing so constructed that the leakage radiation at a distance of one (1) meter from the target does

not exceed 0.1 percent of the useful beam exposure rate at one (1) meter from the target, for any of its operating conditions;

(c) In either case, small areas of reduced protection are acceptable providing the average reading over any 100 square centimeter area at one (1) meter distance from the target does not exceed the values given above.

(123) [(82)] "These regulations" means radiation regulations adopted by the Cabinet for Human Resources, Kentucky's Administrative Regulations on radiation, 902 KAR Chapter 100.

(124) "Transport index" means the dimensionless number (rounded up to the first decimal place) placed on the label of a package to designate the degree of control to be exercised by the carrier during transportation. The transport index is the number expressing the maximum radiation level in millirem per hour at one (1) meter from the external surface of the package.

[(83) "Transport group" means any one (1) of seven (7) groups into which radionuclides in normal form are classified, according to their toxicity and their relative potential hazard in transport in accordance with 902 KAR 100:035, relating to the classification for transport of radioactive materials.]

(125) "Treatment" (waste treatment) means any method, technique or process, including storage for radioactive decay, designed to change the physical, chemical or biological characteristics or composition of any waste in order to render the waste for transport, storage or disposal, amendable to recovery, convertible to another usable material or reduced in volume.

(126) [(84)] "Tube" means an x-ray tube, unless otherwise specified.

(127) [(85)] "Tube housing assembly" means the tube housing with tube installed. It includes high-voltage or filament transformers and other appropriate elements when they are contained within the tube housing.

(128) [(86)] "Tube rating chart" means the set of curves which specify the rated limits of operation of the tube in terms of the technique factors.

(129) "Type A quantity" means a quantity of radioactive material, the aggregate radioactivity of which does not exceed $A_1$ for special form radioactive material or $A_2$ for normal form radioactive material, where $A_1$ and $A_2$ are given in 902 KAR 100:070, Section 21, or may be determined by procedures described in 902 KAR 100:070, Section 20.

(130) "Type B package" means a Type B packaging together with its radioactive contents. A Type B package design is designated as B(U) or B(M). B(U) refers to the need for unilateral approval of international shipments; B(M) refers to the need for multilateral approval. There is no distinction made in how packages with these designations may be used in domestic transportation. To determine their distinction for international transportation, refer to U.S. Department of Transportation regulations in 49 CFR Part 173. A Type B package approved prior to September 6, 1983 was designated only as Type B. Limitations on its use are specified in 902 KAR 100:070, Section 7.

(131) "Type B packaging" means a packaging designed to retain the integrity of containment and shielding required by U.S. Nuclear Regulatory Commission regulations when subjected to the normal conditions of transport and hypothetical accident test conditions set forth in 10 CFR Part 71.

(132) "Type B quantity" means a quantity of radioactive material greater than a Type A quantity.

(133) "U.S. Department of Energy" means the Department of Energy established by Public Law 95-91, August 4, 1977, 91 Stat. 565, 42 U.S.C. 7101 et seq., to the extent that the department exercises functions formerly vested in the U.S. Atomic Energy Commission, its chairman, members, officers and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104(b), (c) and (d) of the Energy Reorganization Act of 1974 (Public Law 93-438, October 11, 1974, 88 Stat. 1233 at 1237, effective January 19, 1975) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (Public Law 95-91, August 4, 1977, 91 Stat. 565 at 577-578, 42 U.S.C. 7151, effective October 1, 1977).

(134) [(87)] "Unrefined and unprocessed ore" means ore in its natural form prior to any processing, such as grinding, roasting, beneficiating, or refining.

(135) [(88)] "Unrestricted area" [(uncontrolled)] means any area access to which is not controlled by the licensee or registrant for purposes of protection of individuals from exposure to radiation and radioactive material[s], and any area used for residential quarters.

(136) [(89)] "Useful beam" means the radiation which passes through the tube housing port and the aperture of the beam limiting device when the exposure switch or [of] timer is activated.

(137) [(90)] "User" means any individual who personally utilizes or manipulates a source of radiation.

(138) [(91)] "Variable-aperture beam limiting device" means a beam limiting device which has capacity for stepless adjustment of the x-ray field size at a given SID.

(139) "Waste" (see "Low-level radioactive waste").

(140) "Well-bore" means a drilled hole in which wireline service operations and subsurface tracer studies are performed.

(141) "Well-logging" means the lowering and raising of measuring devices or tools which may contain sources of radiation in well-bores or cavities for the purpose of obtaining information about the well and/or adjacent formations.

(142) "Wireline" means a cable containing one (1) or more electrical conductors which is used to lower and raise logging tools in the well-bore.

(143) "Wireline service operation" means any evaluation or mechanical service which is performed in the well-bore using devices on a wireline.

(144) [(92)] "Worker" means an individual engaged in activities licensed or registered by the cabinet and controlled by a [the] licensee or registrant, but does not include the licensee or registrant.

(145) [(93)] "X-ray equipment" means an x-ray system, sub-system, or component thereof. X-ray equipment may be used as:

(a) "Mobile" means x-ray equipment mounted on a permanent base with wheels or casters for moving while completely assembled.

(b) "Portable" means x-ray equipment designed to be hand-carried.
(c) "Stationary" means x-ray equipment which is installed in a fixed location.
(d) "Transportable" means x-ray equipment installed in a vehicle or trailer.
(146) [(94)] "X-ray system" means an assemblage of components for the controlled production of x-rays. It includes minimally an x-ray high-voltage generator, an x-ray control, a tube housing assembly, a beam-lighting device, and the necessary supporting structures. Additional components which function with the system are considered integral parts of the system.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

## CABINET FOR HUMAN RESOURCES
## Department for Health Services
## (Proposed Amendment)

**902 KAR 100:015. General requirements.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. The purpose of this regulation is to provide for general requirements, prohibitions, and exemptions that will be applicable to all persons who possess or use sources of ionizing or electronic product radiation in Kentucky.

Section 1. Applicability. This regulation is applicable to all persons who receive, possess, use, transfer, own, or acquire any radioactive [possess or use] sources or ionizing or electronic product radiation in Kentucky.

Section 2. Exposure to be Maintained as Low as is Reasonably Achievable. All persons shall make every reasonable effort to maintain radiation exposures and releases of radioactive materials in effluents to unrestricted areas as low as is reasonably achievable. The term "as low as reasonably achievable" means as low as is reasonably achievable taking into account the state of technology, and the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to the utilization of sources of radiation in the public interest.

Section 3. Prohibited Uses. The following uses of radiation are prohibited in Kentucky:
(1) Hand-held fluoroscopic screens shall not be used.
(2) Shoe-fitting fluoroscopic devices shall not be used.
(3) Sources of radiation detrimental to public health, safety, or property shall not be used.
(4) No person shall use sources of radiation in a manner to intentionally expose any individual except as specifically allowed by these regulations or by license authorization.

Section 4. Records. Each licensee and registrant shall maintain [keep] records showing the receipt, transfer, and disposal of all sources of radiation. Additional record requirements are specified elsewhere in these regulations.

Section 5. Inspections. (1) Each licensee and registrant shall afford to the cabinet, at all reasonable times, opportunity to inspect sources of radiation and the premises and facilities [installations] wherein such sources of radiation are used or stored.
(2) Each licensee and registrant shall make available for inspection, to the cabinet, records maintained pursuant to these regulations.

Section 6. Tests. Each licensee and registrant shall perform or permit the cabinet to perform such tests as the cabinet deems appropriate or

necessary including, but not limited to, tests of:

(1) Sources of radiation;

(2) Facilities [Location] wherein sources of radiation are used or stored;

(3) Radiation detection and monitoring instruments; and

(4) Other equipment and devices used in connection with utilization or storage of licensed or registered sources of radiation.

Section 7. Exemptions. (1) General provision. The cabinet may, upon application or its own initiative, grant such exemptions or exceptions from the requirements of these regulations as it determines are authorized by law or regulation and that will not result in undue hazard to public health, safety, or property.

[(2) Carriers. Common and contract carriers, freight forwarders and warehousemen, and private carriers who are subject to the rules and regulations of the U. S. Department of Transportation or the U. S. Postal Service operating within this state are exempt from licensing to the extent that they transport or store sources of radiation in the regular course of their carriage for another or storage incident thereto, provided that, when such transportation is not subject to the rules and regulations of the United States Nuclear Regulatory Commission, the United States Department of Transportation, or the U. S. Postal Service, such carriers shall comply with these regulations.]

(2) [(3)] United States Department of Energy [Research and Development Administration contractors] and U. S. Nuclear Regulatory Commission contractors. Any U. S. Department of Energy [Research and Development Administration contractor or subcontractor] and [any] U. S. Nuclear Regulatory Commission contractor or subcontractor of the following categories operating within Kentucky [this state] is exempt from these regulations to the extent that such contractor or subcontractor under his contract receives, possesses, uses, transfers, or acquires sources of radiation:

(a) Prime contractors performing work for the U.S. Department of Energy [Research and Development Administration] at United States government-owned or controlled sites, including the transportation of sources of radiation to or from such sites and the performance of contract services during temporary interruptions of such transportation;

(b) Prime contractors of the U.S. Department of Energy [Research and Development Administration] performing research in, or development, manufacture, storage, testing, or transportation of, atomic weapons or components thereof;

(c) Prime contractors of the U.S. Department of Energy [Research and Development Administration] using or operating nuclear reactors or other nuclear devices in a United States government-owned vehicle or vessel; and

(d) Any other prime contractor or subcontractor of the U.S. Department of Energy [Research and Development Administration] or of the U.S. Nuclear Regulatory Commission when the state and the U.S. Nuclear Regulatory Commission jointly determine:

1. That under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety; and

2. That the exemption of the prime [such] contractor or subcontractor is authorized by law.

Section 8. Additional Requirements. The cabinet may, by rule, regulation, or order, impose upon any licensee or registrant such requirements in addition to those established in these regulations as it deems appropriate or necessary to minimize danger to public health, safety, or property.

Section 9. Impounding. Sources of radiation may be subject to impoundment by the cabinet as necessary to minimize danger to public health, safety, or property. Any such impoundment by the cabinet shall not relieve the owner of the responsibility for such sources.

Section 10. Communications. All communications and reports concerning these regulations, and applications filed thereunder, shall be addressed to: Manager, Radiation Control [Branch], Kentucky Cabinet for Human Resources, 275 East Main Street, Frankfort, Kentucky 40621.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary

APPROVED BY AGENCY: November 1, 1985

FILED WITH LRC: November 12, 1985 at 9 a.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager

(1) Type and number of entities affected:

(a) Direct and indirect costs or savings to those affected:

1. First year: N/A

2. Continuing costs or savings: N/A

3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A

(b) Reporting and paperwork requirements: None required.

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: N/A

2. Continuing costs or savings: N/A

3. Additional factors increasing or decreasing costs: N/A

(b) Reporting and paperwork requirements: None required.

(3) Assessment of anticipated effect on state and local revenues: None

(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.

(a) Necessity of proposed regulation if in conflict: N/A

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 100:017. Special [Calibration] requirements for teletherapy licensees.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and to regulate the handling and disposal of radioactive waste. The purpose of this regulation is to specify special [the calibration] requirements for teletherapy licensees.

Section 1. Applicability. This regulation establishes special [calibration] requirements for all teletherapy licensees.

Section 2. Requirements for Full Calibration Measurements of Teletherapy Units. Any licensee authorized under these regulations to use teletherapy units for treating humans shall cause full calibration measurements to be performed on each teletherapy unit:
(1) Prior to the first use of the unit for treating humans;
(2) Prior to treating humans:
(a) Whenever spot-check measurements indicate that the output value differs by more than five (5) percent from the value obtained at the last full calibration corrected mathematically for physical decay;
(b) Following replacement of the radiation source or following reinstallation of the teletherapy unit in a new location;
(c) Following any repair of the teletherapy unit that includes removal of the source or major repair of the components associated with the source exposure assembly; and
(3) At intervals not exceeding one (1) year.
(4) Full calibration measurements required by this section shall include determination of:
(a) The exposure rate or dose rate to an accuracy within plus or minus three (3) percent for the range of field sizes and for the range of distances (or for the axis distance) used in radiation therapy;
(b) The congruence between the radiation field and the field indicated by the light beam localizing device;
(c) The uniformity of the radiation field and its dependence upon the orientation of the useful beam;
(d) Timer accuracy; and
(e) The accuracy of all distance measuring devices used for treating humans.
(5) Full calibration measurements shall be made in accordance with the procedures recommended by the Scientific Committee on Radiation Dosimetry of the American Association of Physicists in Medicine, "Physics in Medicine and Biology," Volume 16, No. 3, 1971, pp. 379-396, filed herein by reference.
(6) The exposure rate or dose rate values determined in this section shall be corrected mathematically for physical decay for intervals not exceeding one (1) month.
(7) Full calibration measurements [required by this section] and physical decay corrections required by this section shall be performed by an expert qualified by training and experience in accordance with Section 5 of this regulation [these regulations].

Section 3. Requirements for Periodic Spot-Check Measurements of Teletherapy Units. (1) Any licensee authorized to use teletherapy units for treating humans shall cause spot-check measurements to be performed on each teletherapy unit at intervals not exceeding one (1) month.
(2) Spot-check measurements [required by this section] shall include determination of:
(a) Timer accuracy;
(b) The congruence between the radiation field and the field indicated by the light beam localizing device;
(c) The accuracy of all distance measuring devices used for treating humans;
(d) The exposure rate, dose rate, or a quantity relating in a known manner to these rates for one (1) typical set of operating conditions; and
(e) The difference between the measurement made in this section and the anticipated output, expressed as a percentage of the anticipated output (i.e., the value obtained at last full calibration corrected mathematically for physical decay) expressed as a percentage of the anticipated output.
(3) Spot-check measurements [required by this section] shall be performed in accordance with procedures established by an expert qualified by training and experience in accordance with Section 5 of this regulation [these regulations]. A qualified expert need not actually perform the spot-check measurements. If a qualified expert does not perform the spot-check measurements, the results of the spot-check measurements shall be reviewed by a qualified expert within fifteen (15) days.

Section 4. Requirements for Calibration of Instruments Used for Full Calibration and Spot-Check Measurements. (1) Full calibration measurements required by Section 2 of this regulation shall be performed using a dosimetry system that has been calibrated by the National Bureau of Standards or by a regional calibration laboratory accredited by the American Association of Physicists in Medicine. The dosimetry system shall have been calibrated within the previous two (2) years and after any servicing that may have affected system calibration.
(2) Spot-check measurements required by Section 3 of this regulation shall be performed using a dosimetry system that has been calibrated in accordance with subsection (1) of this section. Alternatively, a dosimetry system used solely for spot-check measurements may be calibrated by direct intercomparison with a system that has been calibrated in accordance with subsection (1) of this section. This alternative calibration method shall have been

performed within the previous one (1) year and after each servicing that may have affected system calibration. Dosimetry systems calibrated by this alternative method shall not be used for calibration measurements.

Section 5. Minimum Requirements for Qualified Expert for Teletherapy Calibrations. The licensee shall determine if a person is an expert qualified by training and experience to calibrate a teletherapy unit and establish procedures for and review the results of spot-check measurements. The licensee shall determine that the qualified expert:

(1) Is certified by the American Board of Radiology in therapeutic radiological physics, radiological physics, roentgen-ray and gamma-ray physics, or x-ray and radium physics; or

(2) Has the following minimum training and experience:

(a) A master's or doctor's degree in physics, biophysics, radiological physics or health physics;

(b) One (1) year of full-time training in therapeutic radiological physics; and

(c) One (1) year of full-time experience in a radiotherapy facility including personal calibration and spot-check of at least one (1) teletherapy unit.

(3) Licensees that have their teletherapy units calibrated by persons who do not meet these criteria for minimum training and experience may request a license amendment excepting them from the requirements of this section. The request shall include the name of the proposed qualified expert, a description of his training and experience including information similar to that specified in subsection (2) of this section, reports of at least one (1) calibration and spot-check program based on measurements personally made by the proposed expert within the last ten (10) years.

Section 6. Requirements to Install a Permanent Radiation Monitor in Teletherapy Rooms and to Use Portable Survey Instruments or Audible Alarm Dosimeters. (1) Each licensee authorized to use teletherapy units for treating humans shall install a permanent radiation monitor in each teletherapy room for continuous monitoring of beam status.

(2) Each radiation monitor must be capable of providing visible notice of a teletherapy unit malfunction that may result in an exposed or partially exposed source. The visible indicator of high radiation levels must be located so as to be observable by a person entering the treatment room.

(3) Each radiation monitor must be equipped with an emergency power supply separate from the power supply to the teletherapy unit. This emergency power supply may be a battery system.

(4) Each radiation monitor must be tested for proper operation each day before the teletherapy unit is used for treatment of patients.

(5) If a radiation monitor is inoperable for any reason, any person entering the teletherapy room shall use a properly operating portable survey instrument or audible alarm personal dosimeter to monitor for any malfunction of the source exposure mechanism that may have resulted in an exposed or partially exposed source. Survey instruments or dosimeters must be tested daily before use.

Section 7. Inspection and Servicing of the Source Exposure Mechanism; Relief Granted by Certain License Conditions. (1) The licensee shall cause each teletherapy unit used to treat humans to be fully inspected and serviced during source replacement or at intervals not to exceed five (5) years, whichever comes first, to assure proper functioning of the source exposure mechanism.

(2) Inspection and servicing of the teletherapy unit shall be performed by persons specifically licensed to do so by the cabinet, the U.S. Nuclear Regulatory Commission or an Agreement State.

(3) Amendments to teletherapy licenses in effect as of September 1, 1983, which extended the time interval for the inspection and servicing requirement of subsection (1) of this section shall remain in effect and are not rescinded by this section.

Section 8. [6.] Records. The licensee shall maintain, for inspection by the cabinet, records of the measurements, tests, corrective actions, inspection and servicing of the teletherapy units, [and] instrument calibrations, and records of the licensee's evaluation of the qualified expert's training and experience.

(1) Records of full calibration measurements and calibration of the instruments used to make these measurements shall be preserved for five (5) years after completion of the full calibration.

(2) Records of spot-check measurements and corrective actions, and calibration of instruments used to make spot-check measurements, shall be preserved for two (2) years after completion of the spot-check measurements and corrective actions.

(3) Records of the licensee's evaluation of the qualified expert's training and experience shall be preserved for five (5) years after the qualified expert's last performance of a full calibration on the licensee's teletherapy unit.

(4) Records of inspection and servicing of the teletherapy unit under Section 7 of this regulation shall be preserved for five (5) years after the inspection and servicing.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary

APPROVED BY AGENCY: November 1, 1985

FILED WITH LRC: November 12, 1985 at 9 a.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager

(1) Type and number of entities affected:

(a) Direct and indirect costs or savings to those affected:

1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A

(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

## CABINET FOR HUMAN RESOURCES
## Department for Health Services
## (Proposed Amendment)

**902 KAR 100:020. Standards for protection against radiation.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. The purpose of this regulation is to provide for standards for the protection to the user and general public against radiation exposure.

Section 1. Applicability. This regulation applies to all persons licensed or registered pursuant to the cabinet's radiation regulations.

Section 2. Radiation Dose Standards for [Exposure of] Individuals [to Radiation] in Restricted Areas. (1) In accordance with the provisions of Section 3 of this regulation, except as provided in subsection (2) of this section, no licensee or registrant shall possess, use, receive, or transfer sources of radiation in such a manner as to cause any individual in a restricted area to receive in any period of one (1) calendar quarter from all sources of radiation a total occupational [in the licensee's or registrant's possession a] dose in excess of the standards [limits] specified in the following:
(a) Whole body; head and trunk; active blood-forming organs; lens of eyes; or gonads; one and one-fourth (1 1/4) rems per calendar quarter;
(b) Hands and forearms; feet and ankles; eighteen and three-fourths (18 3/4) rems per calendar quarter;
(c) Skin of whole body; seven and one-half (7 1/2) rems per calendar quarter.
(2) A licensee or registrant may permit an individual eighteen (18) years of age or over to receive a total [an] occupational dose to the whole body greater than that permitted under subsection (1) of this section, provided:
(a) During any calendar quarter the total occupational dose to the whole body [from sources of radiation in the licensee's or registrant's possession] shall not exceed three (3) rems; and
(b) The dose to the whole body, when added to the accumulated occupational dose to the whole body, shall not exceed five (5) (N-18) rems where "N" equals the individual's age in years at his last birthday; and
(c) The licensee or registrant has determined the individual's accumulated occupational dose to the whole body on cabinet Form KR-411, or on a clear and legible record containing all information required in that form and has otherwise complied with the requirements of Section 3 of this regulation. As used in subsection (2) of this section, "dose to the whole body" shall be deemed to include any dose to the whole body, gonads, active blood-forming organs, head and trunk, or lens of eye.
(3) For determining the doses specified in this section, a dose from x- or gamma rays up to ten (10) [three (3)] MeV may be assumed to be equivalent to the exposure measured by a properly calibrated, appropriate instrument in air at or near the body surface in the region of the highest dose rate.

Section 3. Determination of Accumulated Dose. (1)(a) Each licensee or registrant shall require any individual, prior to first entry of the individual into the licensee's or registrant's restricted area during each employment or work assignment under such circumstances that the individual will receive or is likely to receive in any period of one (1) calendar quarter an occupational dose in excess of twenty-five (25) percent of the applicable standards specified in Sections 2(1) and 5 of this regulation, to disclose in a written, signed statement, either:
1. That the individual had no prior occupational dose during the current calendar quarter; or
2. The nature and amount of any occupational dose which the individual may have received during the specifically identified current calendar quarter, from sources of radiation possessed or controlled by other persons.
(b) Each licensee or registrant shall maintain records of such statements until the cabinet authorizes disposition. [This section contains requirements which must be satisfied by licensees or registrants who propose, pursuant to Section 2(2) of this regulation, to permit individuals in a restricted area to receive exposure to radiation in excess of the limits specified in Section 2(1) of this regulation.]
(2) Before permitting, pursuant to Section 2(2) of this regulation, any individual eighteen (18) years of age or over to receive an occupational [exposure to] radiation dose in excess of the limits specified in Section 2(1) of this regulation, each licensee or registrant shall:

(a) Obtain a certificate on cabinet Form KR-411, or on a clear and legible record containing all the information required on that form, signed by the individual, showing each period of time after the individual attained the age of eighteen (18) in which the individual received an occupational radiation dose [of radiation]; and

(b) Calculate on cabinet Form KR-411, in accordance with the instructions appearing therein, or on a clear and legible record containing all the information required on that form, the previously accumulated occupational dose received by the individual and the additional dose allowed for that individual under Section 2(2) of this regulation.

(3)(a) In the preparation of cabinet Form KR-411, or on a clear and legible record containing all the information required on that form, the licensee or registrant shall make a reasonable effort to obtain reports of the individual's previously accumulated occupational dose. For each period for which the licensee or registrant obtains such reports, he shall use the dose shown in the report in preparing the form. In any case where a licensee or registrant is unable to obtain reports of the individuals occupational dose for a previous complete calendar quarter, it shall be assumed that the individual has received the occupational dose specified in whichever of the following columns apply:

| | Column 1 | Column 2 |
|---|---|---|
| | Assumed dose in rems for calendar quarters prior to January 1, 1961 | Assumed dose in rems for calendar quarters beginning on or after January 1, 1961 |
| Part of Body | | |
| Whole body, gonads, active blood-forming organs, head and trunk, lens of eye | 3 3/4 | 1 1/4 |

(b) The licensee or registrant shall retain and preserve records used in preparing cabinet Form KR-411 until the cabinet authorizes their disposition. If calculation of the individual's accumulated occupational dose for all periods prior to January 1, 1961, yields a result higher than the applicable accumulated dose value for the individual as of that date, as specified in Section 2(2) of this regulation, the excess may be disregarded.

Section 4. Exposure of Individuals to Concentrations of Radioactive Material in Air in Restricted Areas. (1) No licensee shall possess, use, [receive,] or transfer radioactive material in such a manner as to permit any [cause an] individual in a restricted area to inhale a quantity of [be exposed to airborne] radioactive material in any period of one (1) calendar quarter greater than the quantity which would result from inhalation for forty (40) hours per week for thirteen (13) weeks at uniform concentrations of radioactive material in air specified in Table I, Column I of 902 KAR 100:025. If the radioactive material is of such form that intake by absorption through the skin is likely, individual exposures to radioactive material by any organ from either inhalation or absorption or both routes of intake in any calendar quarter does not exceed that which would result from inhaling such radioactive material for forty (40) hours per week for thirteen (13) weeks at uniform concentrations specified in Table I, Column I of 902 KAR 100:025. [an average concentration in excess of the limits specified in Table I of 902 KAR 100:025, relating to concentrations in air and water above natural background. "Exposed" as used in this section means that the individual is present in an airborne concentration. No allowance shall be made for the use of protective clothing or equipment. or particle size, except as authorized by the cabinet pursuant to subsection (3) of this section.]

(a) Since the concentration specified for tritium oxide vapor assumes equal intakes by skin absorption and inhalation, the total intake permitted is twice that which would result from inhalation alone at the concentration specified for H-3(S) in 902 KAR 100:025, Table I, Column 1 for forty (40) hours per week for thirteen (13) weeks.

(b) For radon-222, the limiting quantity is that inhaled in a period of one (1) calendar year. For radioactive material designated "Sub" in the "Isotope" column of the table, the concentration value specified is based upon exposure to the material as an external radiation source. Individual exposures to these materials may be accounted for as part of the limitation on individual dose in Section 2 of this regulation. These nuclides shall be subject to the precautionary procedures required by subsection (3)(a) of this section.

(c) Multiply the concentration values specified in 902 KAR 100:025, Table I, Column I by 6.3 x E8 milliliters to obtain the quarterly quantity limit. Multiply the concentration value specified in 902 KAR 100:025, Table I, Column 1 by 2.5 x E9 milliliters to obtain the annual quantity limit for Rn-222.

(d) Significant intake by ingestion or injection is presumed to occur only as a result of circumstances such as accident, inadvertence, poor procedure, or similar special conditions. Such intakes must be evaluated and accounted for by techniques and procedures as may be appropriate to the circumstances of the occurrence. Exposures so evaluated shall be included in determining whether the limitation on individual exposures has been exceeded.

(2) No licensee shall possess, use, or transfer mixtures of U-234, U-235, and U-238 in soluble form in such a manner as to permit any individual in a restricted area to inhale a quantity of such material in excess of the intake limits specified in 902 KAR 100:025, Table I, Column 1. If such soluble uranium is of a form such that absorption through the skin is likely, individual exposures to such material shall be controlled so that the uptake of such material by any organ from either inhalation or absorption or both routes of intake does not exceed that which would result from inhaling such material at the limits specified in 902 KAR 100:025, Table I, Column 1 and footnote thereto. Significant intake by ingestion or injection is presumed to occur only as a result of circumstances such as accident, inadvertence, poor procedure, or similar special conditions.

Such intakes must be evaluated and accounted for by techniques and procedures as may be appropriate to the circumstances of the occurrence. Exposures so evaluated shall be included in determining whether the limitation on individual exposures in subsection (1) of this section has been exceeded. [The limits given in Table I of 902 KAR 100:025, relating to concentrations in air and water above natural background, are based upon exposure to the concentrations specified for forty (40) hours in any period of seven (7) consecutive days. In any such period where the number of hours of exposure is less than forty (40), the limits specified in the table may be increased proportionately. In any such period where the number of hours of exposure is greater than forty (40), the limits specified in the table shall be decreased proportionately.]

(3)(a) The licensee shall, as a precautionary procedure, use process or other engineering controls, to the extent practicable, to limit concentrations of radioactive material in air to levels below those which delimit an airborne radioactivity area as defined in 902 KAR 100:010. [Except as authorized by the cabinet pursuant to this section, no allowance shall be made for particle size or the use of protective covering or equipment in determining whether an individual is exposed to an airborne concentration in excess of the limits given in Table I of 902 KAR 100:025, relating to concentrations in air and water above natural background.]

(b) When it is impracticable to apply process or other engineering controls to limit concentrations of radioactive material in air below those defined in 902 KAR 100:010, other precautionary procedures, such as increased surveillance, limitation of working times, or provision of respiratory protective equipment, shall be used to maintain intake of radioactive material by any individual within any period of seven (7) consecutive days as far below that intake of radioactive material which would result from inhalation of such material for forty (40) hours at the uniform concentrations specified in 902 KAR 100:025, Table I, Column 1, as is reasonably achievable. Whenever the intake of radioactive material by any individual exceeds this forty (40) hour control measure, the licensee shall make such evaluations and take such actions as are necessary to assure against recurrence. The licensee shall maintain records of such occurrences, evaluations, and actions taken in a clear and readily identifiable form suitable for summary review and evaluation. [The cabinet may authorize a licensee to expose an individual in a restricted area to airborne concentrations in excess of the limits specified in Table I of 902 KAR 100:025, upon receipt of an application demonstrating that the concentration is composed in whole or in part of particles of such size that such particles are not respirable and that the individual will not inhale the concentrations in excess of the limits established in Table I. Each application under this paragraph shall include an analysis of particle sizes in the concentrations and a description of the methods used in determining the particle size.]

(c) When respiratory protective equipment is used to limit the inhalation of airborne radioactive material pursuant to paragraph (b) of this subsection, the licensee may make allowance for such use in estimating exposures of individuals to such material provided that such equipment is used as approved by the cabinet. [The cabinet may authorize a licensee to expose an individual in a restricted area to airborne concentrations in excess of the limits specified in Table I of 902 KAR 100:025 upon receipt of an application demonstration that the individual will wear protective equipment and that the individual will not inhale, ingest, or absorb quantities of radioactive material in excess of those which might otherwise be permitted under this regulation for individuals in restricted areas during a forty (40) hour week. Each application under this paragraph shall contain the following information:]

[1. A description of the protective equipment to be employed, including the efficiency of the equipment for the material involved;]

[2. Procedures for the fitting, maintenance, and cleaning of the protective equipment;]

[3. Procedures governing the use of the protective equipment, including supervisory procedures and length of time the equipment will be used by the individuals in each work week. The proposed periods for use of the equipment by any individual should not be of such duration as would discourage observation by the individual of the proposed procedures; and]

[4. The average concentrations present in the areas occupied by individuals.]

(d) Notwithstanding the provisions of this subsection, the cabinet may impose further restrictions:

1. On the extent to which a licensee may make allowance for use of respirators in lieu of provision of process, containment, ventilation, or other engineering controls, if application of such controls is found to be practicable; and

2. As might be necessary to assure that the respiratory protective program of the licensee is adequate in limiting exposures of personnel to airborne radioactive material.

(e) The licensee shall notify, in writing, the cabinet at least thirty (30) days before the date that respiratory protective equipment is first used under the provisions of this section.

(4) For purposes of determining compliance with the requirements of this section, the licensee shall use suitable measurements of concentrations of radioactive material in air for detecting and evaluating airborne radioactivity in restricted areas and in addition, as appropriate, shall use measurements of radioactivity in the body, measurements of radioactivity excreted from the body, or any combination of such measurements as may be necessary for timely detection and assessment of individual intakes of radioactive material by exposed individuals. It is assumed that an individual inhales radioactive material at the airborne concentration in which he is present unless he uses respiratory protective equipment pursuant to subsection (3)(c) of this section. When assessment of a particular individual's intake of radioactive material is necessary, intakes less than those which would result from inhalation for two (2) hours in any one (1) day or for ten (10) hours at uniform concentration specified in 902 KAR 100:025, Table I, Column 1 need not be included in such assessment, provided that for any assessment in excess of these amounts the entire amount is included.

Section 5. Exposure of Minors. For determining

the doses specified in this section, a dose from x-rays or gamma rays up to ten (10) [three (3)] MeV may be assumed to be equivalent to the exposure measured by a properly calibrated, appropriate instrument in air at or near the body surface in the region of the highest dose rate.

(1) No licensee or registrant shall possess, use, or transfer sources of radiation in such a manner as to cause any individual within a restricted area, who is under eighteen (18) years of age, to receive in any period of one (1) calendar quarter from all sources of radiation in such licensee's or registrant's possession a dose in excess of ten (10) percent of the standards [limits] specified in Section 2(1)(a), (b) and (c) of this regulation.

(2) No licensee shall possess, use, or transfer radioactive material in such a manner as to cause any individual within a restricted area, who is under eighteen (18) years of age, to be exposed to airborne radioactive material in an average concentration in excess of the limits specified in Table II of 902 KAR 100:025, relating to concentrations in air and water above natural background. For purposes of this subsection, concentrations may be averaged over periods not greater than a week.

(3) The provisions of Section 4(3) of this regulation shall apply to exposures subject to subsection (2) of this section.

Section 6. Exposure of the Fetus. No licensee or registrant should possess, use, or transfer sources of radiation in such a manner as to knowingly cause a fetus to receive a dose, except for the intentional exposure of patients to radiation for the purpose of medical diagnosis or medical therapy, in excess of five-tenths (0.5) rem for the entire gestation period.

Section 7. Permissible Levels of Radiation from External Sources in Unrestricted Areas. It is the intent of this section to limit radiation levels so that it is unlikely that individuals in unrestricted areas would receive a dose to the whole body in excess of five-tenths (0.5) rem in any one (1) year. If, in specific instances, it is determined by the cabinet that this intent is not [being] met, the cabinet may impose such additional requirements on the licensee or registrant as may be necessary to meet the intent.

(1) Except as authorized by the cabinet pursuant to subsection (2) of this section, no licensee or registrant shall possess, use, or transfer sources of radiation in such a manner as to create in any unrestricted areas from such sources of radiation in his possession:

(a) Radiation levels which, if an individual were continuously present in the area, could result in his receiving a dose in excess of two (2) millirems in any one (1) hour; or

(b) Radiation levels which, if an individual were continuously present in the area, could result in his receiving a dose in excess of 100 millirems in any seven (7) consecutive days.

(2) Any person may apply to the cabinet for proposed limits upon levels of radiation in unrestricted areas in excess of those specified in subsection (1) of this section resulting from the applicant's possession or use of sources of radiation. Such applications should include information as to anticipated average radiation levels and anticipated occupancy times for each unrestricted area involved. The cabinet will approve the proposed limits if the applicant demonstrates to the satisfaction of the cabinet that the proposed limits are not likely to cause any individual to receive a dose to the whole body in any period of one (1) calendar year in excess of five-tenths (0.5) rem.

Section 8. Concentration of Radioactivity in Effluents to Unrestricted Areas. (1) A licensee shall not possess, use, or transfer licensed material so as to release to an unrestricted area radioactive material in concentrations which exceed the limits specified in Table II of 902 KAR 100:025, relating to concentrations in air and water above natural background, except as authorized pursuant to subsection (2) of this section and 902 KAR 100:021. For purposes of this subsection, concentrations may be averaged over periods not greater than one (1) year.

(2) An application for a license or amendment may include proposed limits higher than those specified in subsection (1) of this section. The cabinet will approve the proposed limits if the applicant demonstrates:

(a) That the applicant has made a reasonable effort to minimize the radioactivity contained in effluents to unrestricted areas; and

(b) That it is not likely that radioactive material discharged in the effluent would result in the exposure of an individual to concentrations of radioactive material in air or water exceeding the limits specified in Table II of 902 KAR 100:025, relating to concentrations in air and water above natural background.

(3) An application for higher limits pursuant to subsection (2) of this section shall include information demonstrating that the applicant has made a reasonable effort to minimize the radioactivity discharged in effluents to unrestricted areas, and shall include, as pertinent:

(a) Information as to flow rates, total volume of effluent, peak concentration of each radionuclide in the effluent, and concentration of each radionuclide in the effluent averaged over a period of one (1) year at the point where the effluent leaves a stack, tube, pipe, or similar conduit;

(b) A description of the properties of the effluents, including:

1. Chemical composition;

2. Physical characteristics, including suspended solids content in liquid effluents, and nature of gas or aerosol for air effluents;

3. The hydrogen ion concentrations (pH) of liquid effluents; and

4. The size range of particulates in effluents released into air.

(c) A description of the anticipated human occupancy in the unrestricted area where the highest concentration of radioactive material from the effluent is expected, and, in the case of a river or stream, a description of water uses downstream from the point of release of the effluent;

(d) Information as to the highest concentration of each radionuclide in an unrestricted area, including anticipated concentrations averaged over a period of one (1) year;

1. In air at any point of human occupancy; or

2. In water at points of use downstream from the point of release of the effluent.

(e) The background concentration of radionuclides in the receiving river or stream prior to the release of liquid effluent;

(f) A description of the environmental monitoring equipment, including sensitivity of the system, and procedures and calculations to determine concentrations of radionuclides in the unrestricted area and possible reconcentrations of radionuclides;

(g) A description of the waste treatment facilities and procedures used to reduce the concentration of radionuclides in effluents prior to their release.

(4) For the purposes of this section, the concentration limits in Table II of 902 KAR 100:025, relating to concentrations in air and water above natural background, shall apply at the boundary of the restricted area. The concentration of radioactive material discharged through a stack, tube, pipe, or similar conduit may be determined with respect to the point where the material leaves the conduit. If the conduit discharges within the restricted area, the concentration at the boundary may be determined by applying appropriate factors for dilution, dispersion, or decay between the point of discharge and the boundary.

(5) In addition to limiting concentrations in effluent streams, the cabinet may limit quantities of radioactive material released in air or water during a specified period of time if it appears that the daily intake of radioactive material from air, water, or food by a suitable sample of an exposed population group, averaged over a period not exceeding one (1) year, would otherwise exceed the daily intake resulting from continuous exposure to air or water containing one-third (1/3) the concentration of radioactive material specified in Table II of 902 KAR 100:025, relating to concentrations in air and water above natural background.

(6) The provisions of this section do not apply to disposal of radioactive material into sanitary sewerage systems, which is governed by 902 KAR 100:021 [Section 17 of this regulation].

Section 9. Orders Requiring Furnishing of Bioassay Services. Where necessary or desirable in order to aid in determining the extent of an individual's exposure to concentrations of radioactive material, the cabinet may incorporate license provisions or issue an order requiring a licensee to make available to the individual appropriate bioassay services and to furnish a copy of the reports of such services to the cabinet.

Section 10. Surveys. Each licensee or registrant shall make or cause to be made such surveys as may be necessary for him to establish compliance with these regulations.

Section 11. Personnel Monitoring. Each licensee or registrant shall supply appropriate personnel monitoring equipment to, and shall require the use of such equipment by:

(1) Each individual who enters a restricted area under such circumstances that he receives, or is likely to receive, a dose in any calendar quarter in excess of twenty-five (25) percent of the applicable value specified in Section 2(1) of this regulation.

(2) Each individual under eighteen (18) years of age who enters a restricted area under such circumstances that he receives, or is likely to receive, a dose in any calendar quarter in excess of five (5) percent of the applicable value specified in Section 2(1) of this regulation.

(3) Each individual who enters a high radiation area.

Section 12. Caution Signs, Labels and Signals. (1) General.

(a) Except as otherwise authorized by the cabinet, symbols and lettering prescribed by this section shall use the conventional radiation caution colors (magenta or purple on yellow background). The symbol prescribed by this section is the conventional three (3) bladed design as described in U.S. Nuclear Regulatory Commission regulations 10 CFR Part 20.203(a).

(b) In addition to the contents of signs and labels prescribed in this regulation, a licensee or registrant may provide on or near such signs and labels any additional information which may be appropriate in aiding individuals to minimize exposure to radiation.

(2) Radiation areas. Each radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION (or DANGER), RADIATION AREA.

(3) High radiation areas.

(a) Each high radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION (or DANGER), HIGH RADIATION AREA.

(b) Each entrance or access point to a high radiation area shall be:

1. Equipped with a control device which shall cause the level of radiation to be reduced below that at which an individual might receive a dose of 100 millirems in one (1) hour upon entry into the area; or

2. Equipped with a control device which shall energize a conspicuous visible or [and] audible alarm signal in such a manner that the individual entering the high radiation area and the licensee, registrant, or a supervisor of the activity are made aware of the entry; or

3. Maintained locked except during periods when access to the area is required, with positive control over each individual entry.

(c) The controls required by paragraph (b) of this subsection shall be established in such a way that no individual will be prevented from leaving a high radiation area.

[(d) For those entrances requiring controls as indicated in paragraph (b) of this subsection:]

[1. The controls required by paragraph (b)1 of this subsection shall be constructed in such a manner that the primary radiation cannot be reactivated until all entrances have been secured, and the radiation on-off control is reset at the control panel.]

[2. The controls required by paragraph (b)2 of this subsection shall be constructed in such a manner that when the warning device is activated, it shall be necessary to shut off or secure the source of radiation and secure all tripped entrances prior to being able to inactivate the alarm system.]

(d) [(e)] In the case of a high radiation area established for a period of thirty (30) days or less, direct surveillance to prevent unauthorized entry may be substituted for the controls required by paragraph (b) of this subsection.

(e) [(f)] Any licensee, or registrant, or applicant for a license or registration, may apply to the cabinet for approval of methods not included in paragraphs (b) and (d) [(e)] of this subsection for controlling access to high radiation areas. The cabinet will [may] approve the proposed alternatives if the licensee, or registrant, or applicant demonstrates that the alternative methods of control will prevent unauthorized entry into a high radiation area, and that the requirement of paragraph (c) of this subsection is met.

(f) Each area in which there may exist radiation levels in excess of 500 rems in one (1) hour at one (1) meter from a sealed radioactive source that is used to irradiate materials shall:

1. Have each entrance or access point equipped with entry control devices which shall function automatically to prevent any individual from inadvertently entering the area when such radiation levels exist; permit deliberate entry into the area only after a control device is actuated that shall cause the radiation level within the area, from the sealed source, to be reduced below that at which it would be possible for an individual to receive a dose in excess of 100 millirems in one (1) hour; and prevent operation of the source if the source would produce radiation levels in the area that could result in a dose to an individual in excess of 100 millirems in one (1) hour. The entry control devices required by this paragraph shall be established in such a way that no individual will be prevented from leaving the area.

2. Be equipped with additional control devices such that upon failure of the entry control devices to function as required by subparagraph 1 of this paragraph the radiation level within the area, from the sealed source shall be reduced below that at which it would be possible for an individual to receive a dose in excess of 100 millirems in one (1) hour; and visible and audible alarm signals shall be generated to make an individual attempting to enter the area aware of the hazard and the licensee or at least one (1) other individual, who is familiar with the activity and prepared to render or summon assistance, aware of such failure of the entry control devices.

3. Be equipped with control devices such that upon failure or removal of physical radiation barriers other than the source's shielded storage container the radiation level from the source shall be reduced below that at which it would be possible for an individual to receive a dose in excess of 100 millirems in one (1) hour; and visible and audible alarm signals shall be generated to make potentially affected individuals aware of the hazard and the licensee or at least one (1) other individual who is familiar with the activity and prepared to render or summon assistance, aware of the failure or removal of the physical barrier. When the shield for the stored source is a liquid, means shall be provided to monitor the integrity of the shield and to signal, automatically, comprise permanent structural components, such as walls, that have no credible probability of failure or removal in ordinary circumstances need not meet the requirements of this paragraph.

4. Be equipped with devices that will automatically generate visible and audible alarm signals to alert personnel in the area before the source can be put into operation and in sufficient time for any individual in the area to operate a clearly identified control device which shall be installed in the area and which can prevent the source from being put into operation.

5. Be controlled by use of such administrative procedure and such devices as are necessary to assure that the area is cleared of personnel prior to each use of the source preceding which use it might have been possible for an individual to have entered the area.

6. Be checked by a physical radiation measurement to assure that prior to the first individual's entry into the area after any use of the source, the radiation level from the source in the area is below that at which it would be possible for an individual to receive a dose in excess of 100 millirems in one (1) hour.

7. Have entry control devices required in subparagraph 1 of this paragraph which have been tested for proper functioning prior to initial operation with such source of radiation on any day that operations have not been interrupted from the previous day or before resuming operations after any unintended interruption, and for which records are kept of the dates, times, and results of such tests of function. No operations other than those necessary to place the source in safe condition or to effect repairs on controls shall be conducted with such source unless control devices are functioning properly. The licensee shall submit an acceptable schedule for more complete periodic tests of the entry control and warning systems to be established and adhered to as a condition of the license.

8. Have those entry and exit portals that are used in transporting materials to and from the irradiation area, and that are not intended for use by individuals, controlled by such devices and administrative procedures as are necessary to physically protect and warn against inadvertent entry by any individual through such portals. Exit portals for processed materials shall be equipped to detect and signal the presence of loose radiation sources that are carried toward such an exit and to automatically prevent such loose sources from being carried out of the area.

(g) The requirements of paragraph (f) of this subsection shall not apply to radioactive sources that are used in teletherapy, industrial radiography, or in completely self-contained irradiators. In the case of open field irradiators in which certain of the criteria specified in paragraph (f) of this subsection are impracticable, equivalent protection shall be provided by license conditions.

(4) Airborne radioactivity areas. Each airborne radioactivity area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION (or DANGER), AIRBORNE RADIOACTIVITY AREA.

(5) Additional requirements.

(a) Each area or room in which any radioactive material, other than natural uranium or thorium, is used or stored in an amount exceeding ten (10) times the quantity of radioactive material specified in 902 KAR 100:030, relating to quantity bases for posting and disposal, shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION (or DANGER), RADIOACTIVE MATERIAL.

(b) Each area or room in which natural uranium

or thorium is used or stored in an amount exceeding 100 times the quantity specified in 902 KAR 100:030, relating to quantity bases for posting and disposal, shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION (or DANGER), RADIOACTIVE MATERIAL.

(6) Containers.

(a) Except as provided in paragraph (c) of this subsection, each container of radioactive material shall bear a durable, clearly visible label identifying the radioactive contents.

(b) A label required pursuant to paragraph (a) of this subsection shall bear the radiation caution symbol and the words: CAUTION (or DANGER), RADIOACTIVE MATERIAL. It shall also provide sufficient information to permit individuals handling or using the containers, or working in the vicinity thereof, to take precautions to avoid or minimize exposures. As appropriate, the information shall include radiation levels, kinds of material, estimate of activity, date for which activity is estimated, and other relevant information.

(c) Notwithstanding the provisions of paragraph (a) of this subsection, labeling is not required:

1. For containers that do not contain radioactive materials in quantities greater than the applicable quantities listed in 902 KAR 100:030, relating to quantity bases for posting and disposal;

2. For containers containing only natural uranium or thorium in quantities no greater than ten (10) times the applicable quantities listed in 902 KAR 100:030, relating to quantity bases for posting and disposal;

3. For containers that do not contain radioactive material in concentrations greater than the applicable concentrations listed in Column 2, Table I of 902 KAR 100:025, relating to concentrations in air and water above natural background;

4. For containers when they are attended by an individual who takes the precautions necessary to prevent the exposure of any individual to radiation or radioactive material in excess of the limits <u>established</u> [establishing] by the requirements in this regulation;

5. For containers when they are in transport and packaged and labeled in accordance with regulations published by the United States Department of Transportation;

6. For containers which are accessible (for example, containers in locations such as water-filled canals, storage vaults, or hot cells) only to individuals authorized to handle or use them, or to work in the vicinity thereof, provided that the contents are identified to such individuals by a readily available written record; and

7. For manufacturing and process equipment such as piping and tanks.

(d) <u>Each licensee shall, prior to disposal of an empty uncontaminated container to unrestricted areas, remove or deface the radioactive material label or otherwise clearly indicate that the container no longer contains radioactive material.</u> [Where containers are used for storage, the labels required in paragraph (a) of this subsection shall state also the quantities and kind of radioactive materials in the containers and the date of measurement of the quantities.]

(7) <u>All radiation-producing machines shall be labeled in a manner which cautions individuals that radiation is produced when the machine is being operated.</u> [All x-ray equipment capable of producing radiation when operated shall be labeled in a manner which cautions individuals of such fact.] This label shall be affixed in a clearly visible location on the face of the control unit.

Section 13. Exceptions from Posting and Labeling Requirements. Notwithstanding the provisions of Section 12 of this regulation:

(1) A room or area is not required to be posted with a caution sign because of the presence of a sealed source, provided the radiation level twelve (12) inches from the surface of the source container or housing does not exceed five (5) millirems per hour.

(2) Rooms or other areas in hospitals are not required to be posted with caution signs <u>and control of entrance or access thereto pursuant to Section 12(3) of this regulation is not required,</u> because of the presence of patients containing radioactive material, provided that there are personnel in attendance who shall take the precautions necessary to prevent the exposure of any individuals to radiation or radioactive material in excess of the limits established in this regulation.

(3) Caution signs are not required to be posted at areas or rooms containing radioactive material for periods of less than eight (8) hours provided that:

(a) The <u>material is</u> [materials are] constantly attended during such periods by an individual who shall take the precautions necessary to prevent the exposure of any individual to radiation or radioactive material in excess of the limits established in this regulation; and

(b) Such area or room is subject to the licensee's control.

(4) A room or other area is not required to be posted with a caution sign, and control is not required for each entrance or access point to a room or other area which is a high radiation area solely because of the presence of radioactive material prepared for transport and packaged and labeled in accordance with regulations of the United States Department of Transportation.

Section 14. Storage <u>and Control</u> of Sources of Radiation. Sources of radiation shall be secured against unauthorized removal from the place of storage. <u>Sources of radiation in an unrestricted area and not in storage shall be tended under the constant surveillance and immediate control of the licensee.</u>

[Section 15. General Requirements for Waste Disposal. No licensee shall dispose of any radioactive material except:]

[(1) By transfer to an authorized recipient as provided in 902 KAR 100:040, relating to the licensing of radioactive materials; or]

[(2) As authorized pursuant to Sections 8, 16, 17, or 18 of this regulation.]

[Section 16. Method of Obtaining Approval of Proposed Disposal Procedures. Any person may apply to the cabinet for approval of proposed procedures to dispose of radioactive material in a manner not otherwise authorized in this regulation. Each application shall include a description of the radioactive material,

including the quantities and kinds of radioactive material and the levels of radioactivity involved, and the proposed manner and conditions of disposal. The application, where appropriate should also include an analysis and evaluation of pertinent information as to the nature of the environment, including topographical, geological, meteorological, and hydrological characteristics; usage of ground and surface waters in the general area; the nature and location of other potentially affected facilities; and procedures to be observed to minimize the risk of unexpected or hazardous exposures. The cabinet will not approve any application for a license to receive radioactive material from other persons for disposal on land not owned by the Commonwealth of Kentucky or the federal government.]

[Section 17. Disposal by Release into Sanitary Sewerage Systems. No licensee shall discharge radioactive material into a sanitary sewerage system unless:]

[(1) It is readily soluble or dispersible in water; and]

[(2) The quantity of any radioactive material released into the system by the licensee in any one (1) day does not exceed the larger of paragraphs (a) or (b) of this subsection:]

[(a) The quantity which, if diluted by the average daily quantity of sewage released into the sewer by the licensee, will result in an average concentration not greater than the limits specified in 902 KAR 100:025, relating to concentrations in air and water above natural background; or]

[(b) Ten (10) times the quantity of such material specified in 902 KAR 100:030, relating to quantity bases for posting and disposal; and]

[(3) The quantity of any radioactive material released in any one (1) month, if diluted by the average monthly quantity of water released by the licensee, will not result in an average concentration exceeding the limits specified in Table I, Column 2, of 902 KAR 100:025, relating to concentrations in air and water above natural background; and]

[(4) The gross quantity of radioactive material released into the sewerage system by the licensee does not exceed one (1) curie per year. Excreta, blood and blood plasma from individuals undergoing medical diagnosis or therapy with radioactive material shall be exempt from any limitations contained in this regulation: provided that, the licensee provides for appropriate radiological monitoring whenever any waste line in the licensee's installation which may carry excreta, blood or blood plasma is opened.]

[Section 18. Disposal by Burial in Soil. No licensee shall dispose of radioactive material by burial in soil unless:]

[(1) The total quantity of radioactive materials buried at any one (1) location and time does not exceed, at the time of burial, 1,000 times the amount specified in 902 KAR 100:030, relating to quantity bases for posting and disposal; and]

[(2) Burial is at a minimum depth of four (4) feet; and]

[(3) Successive burials are separated by distances of at least six (6) feet and not more than twelve (12) burials are made in any year.]

[Section 19. Disposal by Incineration. No licensee shall incinerate radioactive material for the purpose of disposal or preparation for disposal except as specifically approved by the cabinet pursuant to Sections 8 and 16 of this regulation.]

Section 15. [20.] Records of Surveys and Radiation Monitoring[, and Disposal]. (1) Each licensee or registrant shall maintain records showing the radiation exposure of all individuals for whom personnel monitoring is required under Section 11 of this regulation. Such records shall be kept on Form KR-401, in accordance with the instructions contained in that form, or on clear and legible records containing all the information required by Form KR-401. The doses entered on the forms or records shall be for periods of time not exceeding one (1) calendar quarter.

(2) Each licensee or registrant shall maintain records in the same units used in this regulation, showing the results of surveys required by Section 10 of this regulation[, and disposal made under Sections 8, 16, 17, and 18 of this regulation].

(3)(a) Records of individual exposure to radiation and to radioactive material which must [radiation exposure shall] be maintained pursuant to the provisions of subsection (1) of this section and records of bioassays, including results of whole body counting examinations, made pursuant to Section 9 of this regulation shall be preserved [indefinitely or] until the cabinet authorizes their disposal. [Records which must be maintained pursuant to this section may be maintained in the form of microfilm.]

(b) Records of the results of surveys and monitoring which must be maintained pursuant to subsection (2) of this section shall be preserved for three (3) years after completion of the survey except that the following records shall be maintained until the cabinet authorizes their disposition:

1. Records of the results of surveys to determine compliance with Section 4(1) of this regulation;

2. In the absence of personnel monitoring data, records of the results of surveys to determine external radiation dose; and

3. Records of the results of surveys used to evaluate the release of radioactive effluents to the environment.

(4) The discontinuance or curtailment of activities does not relieve the licensee or registrant of responsibility for retaining all records required by this section. A licensee or registrant may, however, request the cabinet to accept such records. The acceptance of the records by the cabinet relieves the licensee or registrant of subsequent responsibility only in respect to their preservation as required by this section.

(5) Records which must be maintained pursuant to this section may be the original or a reproduced copy or microform if such reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by cabinet regulations.

(6) If there is a conflict between the cabinet's regulations in this section, license condition, or other written cabinet approval or

authorization pertaining to the retention period for the same type of record, the retention period specified in the regulations in this section for such records shall apply unless the cabinet, pursuant to 902 KAR 100:015, Section 7(1), has granted a specific exemption from the record retention requirements specified in the regulations in this section.

Section 16. [21.] Reports of Theft or Loss of Sources of Radiation. (1) Each licensee or registrant shall report [promptly] by telephone to the cabinet the theft or loss of any source of radiation immediately after such theft or loss becomes known.

(2) Each licensee or registrant who is required to make a report pursuant to subsection (1) of this section shall within thirty (30) days after he learns of the loss or theft, make a report in writing to the cabinet setting forth the following information:

(a) A description of the device, or if radioactive material is involved, the kind, quantity, chemical and physical form:

(b) A description of the circumstances under which the loss or theft occurred;

(c) A statement of disposition or probable disposition of the device or radioactive material involved;

(d) Radiation exposure, circumstances under which the exposures occurred, and the extent of possible hazard to persons in unrestricted areas;

(e) Actions which have been taken, or will be taken, to recover the device or material; and

(f) Procedures or measures which have been or will be adopted to prevent a recurrence of the loss or theft of the device or radioactive material.

(3) Subsequent to filing the written report, any substantive additional information on the loss or theft which becomes available to the licensee or registrant shall be reported to the cabinet within thirty (30) days after he learns of such information.

(4) Any report filed with the cabinet pursuant to this section shall be so prepared that names of individuals who may have received exposure to radiation are stated in a separate part of the report.

Section 17. [22.] Notification of Incidents. (1) Immediate notification. Each licensee or registrant shall immediately notify the cabinet by telephone and by telegram, mailgram, or facsimile [telegraph] of any incident involving any source of radiation possessed by him which may have caused or threatens to cause:

(a) A dose to the whole body of any individual to twenty-five (25) rems or more of radiation; a dose to the skin of the whole body of any individual of 150 rems or more of radiation or a dose to the feet, ankles, hands, or forearms of any individual to 375 rems or more of radiation; or

(b) The release of radioactive material in concentrations which, if averaged over a period of twenty-four (24) hours, would exceed 5,000 times the limits specified for such materials in Table II of 902 KAR 100:025, relating to concentrations in air and water above natural background; or

(c) A loss of one (1) working week or more of the operations of any facilities affected; or

(d) Damage to property in excess of $200,000 [$100,000].

(2) Twenty-four (24) hour notification. Each licensee or registrant shall within twenty-four (24) hours notify the cabinet by telephone and by telegram, mailgram or facsimile [telegraph] of any incident involving any source of radiation possessed by him which may have caused or threatens to cause:

(a) A dose to the whole body of any individual to five (5) rems or more of radiation; a dose to the skin of the whole body of any individual to thirty (30) rems or more of radiation; or a dose to the feet, ankles, hands, or forearms to seventy-five (75) rems or more of radiation; or

(b) The release of radioactive material in concentrations which, if averaged over a period of twenty-four (24) hours, would exceed 500 times the limits specified for such materials in Table II of 902 KAR 100:025, relating to concentrations in air and water above natural background; or

(c) A loss of one (1) day or more of the operations of any facilities affected; or

(d) Damage to property in excess of $2,000 [$1,000].

(3) Reports [Any report] filed with the cabinet pursuant to this section shall be prepared in such manner that names of individuals who have received exposure to radiation will be stated in a separate part of the report.

Section 18. [23.] Report to Former Employees and Others of Exposure to Radiation. Each licensee or registrant shall furnish to any individual reports of his exposure to radiation as required by these regulations.

Section 19. [24.] Reports of Overexposures and Excessive Levels and Concentrations. (1) In addition to any notification required by Section 17 [22] of this regulation, each licensee or registrant shall make a report in writing within thirty (30) days to the cabinet of:

(a) Each exposure of an individual to radiation or concentrations of radioactive material in excess of any applicable limit as set forth in this regulation or as otherwise approved by the cabinet; or

(b) Any incident for which notification is required by Section 17 [22] of this regulation; or

(c) Levels of radiation or concentrations of radioactive material (whether or not involving excessive exposure of any individual) in an unrestricted area in excess of ten (10) times any applicable limit as set forth in this regulation or as otherwise approved by the cabinet. Each report required under this subsection shall describe the extent of exposure of individuals to radiation or to radioactive material; levels of radiation and concentrations of radioactive material involved; the cause of the exposure, levels or [of] concentrations; and corrective steps taken or planned to assure against a recurrence.

(2) Any report filed with the cabinet pursuant to this section shall be prepared in such a manner that names of individuals, with social security numbers and dates of birth, who have received exposure to radiation will be stated in a separate part of the report.

Section 20. [25.] Notifications and Reports to Individuals. When a licensee or registrant is required pursuant to Section 19 [24] of this

regulation to report to the cabinet any exposure of an individual to radiation or radioactive material, the licensee or registrant shall also notify the individual. Such notice shall be transmitted at a time not later than the transmittal to the cabinet, and shall comply with other applicable provisions of these regulations.

Section 21. [26.] Vacating Installations. Each specific licensee before vacating or relinquishing possession or control of premises at [any installation] which licensed material [may] have been used or stored shall [contaminated by radioactive material as a result of the licensee's activities shall], no less than thirty (30) [fifteen (15)] days prior to such vacating, notify the cabinet in writing of intent to vacate. The cabinet may require that the licensee provide for decontamination of the installation to a degree consistent with subsequent use as an uncontrolled area. The details are to be specified in each case by the cabinet.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 100:025. Concentrations above natural background for air and water.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and to regulate the handling and disposal of radioactive waste. The purpose of this regulation is to provide for the concentrations of radioactivity in air and water above natural background.

Section 1. Applicability. This regulation applies to persons licensed pursuant to the cabinet's radiation regulations.

Section 2. Table. The following table provides for the average concentrations of radioactivity in air and water above natural background where applicable in the cabinet's radiation regulations:

(See table on following pages)

| Element (Atomic Number) | | Isotope | Table I Column 1 Air (uc/ml) | Table I Column 2 Water (uc/ml) | Table II Column 1 Air (uc/ml) | Table II Column 2 Water (uc/ml) |
|---|---|---|---|---|---|---|
| Actinium (89) | Ac 227 | S | $2\times10^{-12}$ | $6\times10^{-5}$ | $8\times10^{-14}$ | $2\times10^{-6}$ |
| | | I | $3\times10^{-11}$ | $9\times10^{-3}$ | $9\times10^{-13}$ | $3\times10^{-4}$ |
| | Ac 228 | S | $8\times10^{-8}$ | $3\times10^{-3}$ | $3\times10^{-9}$ | $9\times10^{-5}$ |
| | | I | $2\times10^{-8}$ | $3\times10^{-3}$ | $6\times10^{-10}$ | $9\times10^{-5}$ |
| Americium (95) | Am 241 | S | $6\times10^{-12}$ | $1\times10^{-4}$ | $2\times10^{-13}$ | $4\times10^{-6}$ |
| | | I | $1\times10^{-10}$ | $8\times10^{-4}$ | $4\times10^{-12}$ | $3\times10^{-5}$ |
| | Am 242 M | S | $6\times10^{-12}$ | $1\times10^{-4}$ | $2\times10^{-13}$ | $4\times10^{-6}$ |
| | | I | $3\times10^{-10}$ | $3\times10^{-3}$ | $9\times10^{-12}$ | $9\times10^{-5}$ |
| | Am 242 | S | $4\times10^{-8}$ | $4\times10^{-3}$ | $1\times10^{-9}$ | $1\times10^{-4}$ |
| | | I | $5\times10^{-8}$ | $4\times10^{-3}$ | $2\times10^{-9}$ | $1\times10^{-4}$ |
| | Am 243 | S | $6\times10^{-12}$ | $1\times10^{-4}$ | $2\times10^{-13}$ | $4\times10^{-6}$ |
| | | I | $1\times10^{-10}$ | $8\times10^{-4}$ | $4\times10^{-12}$ | $3\times10^{-5}$ |
| | Am 244 | S | $4\times10^{-6}$ | $1\times10^{-1}$ | $1\times10^{-7}$ | $5\times10^{-3}$ |
| | | I | $2\times10^{-5}$ | $1\times10^{-1}$ | $8\times10^{-7}$ | $5\times10^{-3}$ |
| Antimony (51) | Sb 122 | S | $2\times10^{-7}$ | $8\times10^{-4}$ | $6\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $1\times10^{-7}$ | $8\times10^{-4}$ | $5\times10^{-9}$ | $3\times10^{-5}$ |
| | Sb 124 | S | $2\times10^{-7}$ | $7\times10^{-4}$ | $5\times10^{-9}$ | $2\times10^{-5}$ |
| | | I | $2\times10^{-8}$ | $7\times10^{-4}$ | $7\times10^{-10}$ | $2\times10^{-5}$ |
| | Sb 125 | S | $5\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $3\times10^{-8}$ | $3\times10^{-3}$ | $9\times10^{-10}$ | $1\times10^{-4}$ |
| Argon (18) | A 37 | Sub | $6\times10^{-3}$ | ------ | $1\times10^{-4}$ | ------ |
| | A 41 | Sub | $2\times10^{-6}$ | ------ | $4\times10^{-8}$ | ------ |
| Arsenic (33) | As 73 | S | $2\times10^{-6}$ | $1\times10^{-2}$ | $7\times10^{-8}$ | $5\times10^{-4}$ |
| | | I | $4\times10^{-7}$ | $1\times10^{-2}$ | $1\times10^{-8}$ | $5\times10^{-4}$ |
| | As 74 | S | $3\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $5\times10^{-5}$ |
| | | I | $1\times10^{-7}$ | $2\times10^{-3}$ | $4\times10^{-9}$ | $5\times10^{-5}$ |
| | As 76 | S | $1\times10^{-7}$ | $6\times10^{-4}$ | $4\times10^{-9}$ | $2\times10^{-5}$ |
| | | I | $1\times10^{-7}$ | $6\times10^{-4}$ | $3\times10^{-9}$ | $2\times10^{-5}$ |
| | As 77 | S | $5\times10^{-7}$ | $2\times10^{-3}$ | $2\times10^{-8}$ | $8\times10^{-5}$ |
| | | I | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $8\times10^{-5}$ |
| Astatine (85) | At 211 | S | $2\times10^{-12}$ | $1\times10^{-4}$ | $6\times10^{-14}$ | $4\times10^{-6}$ |
| | | I | $1\times10^{-10}$ | $8\times10^{-4}$ | $3\times10^{-12}$ | $3\times10^{-5}$ |
| | | S | $7\times10^{-9}$ | $5\times10^{-5}$ | $2\times10^{-10}$ | $2\times10^{-6}$ |
| | | I | $3\times10^{-8}$ | $2\times10^{-3}$ | $1\times10^{-9}$ | $7\times10^{-5}$ |
| Barium (56) | Ba 131 | S | $1\times10^{-6}$ | $5\times10^{-3}$ | $4\times10^{-8}$ | $2\times10^{-4}$ |
| | | I | $4\times10^{-7}$ | $5\times10^{-3}$ | $1\times10^{-8}$ | $2\times10^{-4}$ |
| | Ba 140 | S | $1\times10^{-7}$ | $8\times10^{-4}$ | $4\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $4\times10^{-8}$ | $7\times10^{-4}$ | $1\times10^{-9}$ | $2\times10^{-5}$ |
| Berkelium (97) | Bk 249 | S | $9\times10^{-10}$ | $2\times10^{-2}$ | $3\times10^{-11}$ | $6\times10^{-4}$ |
| | | I | $1\times10^{-7}$ | $2\times10^{-2}$ | $4\times10^{-9}$ | $6\times10^{-4}$ |
| | Bk 250 | S | $1\times10^{-7}$ | $6\times10^{-3}$ | $5\times10^{-9}$ | $2\times10^{-4}$ |
| | | I | $1\times10^{-6}$ | $6\times10^{-3}$ | $4\times10^{-8}$ | $2\times10^{-4}$ |
| Beryllium (4) | Be 7 | S | $6\times10^{-6}$ | $5\times10^{-2}$ | $2\times10^{-7}$ | $2\times10^{-3}$ |
| | | I | $1\times10^{-6}$ | $5\times10^{-2}$ | $4\times10^{-8}$ | $2\times10^{-3}$ |
| Bismuth (83) | Bi 206 | S | $2\times10^{-7}$ | $1\times10^{-3}$ | $6\times10^{-9}$ | $4\times10^{-5}$ |
| | | I | $1\times10^{-7}$ | $1\times10^{-3}$ | $5\times10^{-9}$ | $4\times10^{-5}$ |
| | Bi 207 | S | $2\times10^{-7}$ | $2\times10^{-3}$ | $6\times10^{-9}$ | $6\times10^{-5}$ |
| | | I | $1\times10^{-8}$ | $2\times10^{-3}$ | $5\times10^{-10}$ | $6\times10^{-5}$ |
| | Bi 210 | S | $6\times10^{-9}$ | $1\times10^{-3}$ | $2\times10^{-10}$ | $4\times10^{-5}$ |
| | | I | $6\times10^{-9}$ | $1\times10^{-3}$ | $2\times10^{-10}$ | $4\times10^{-5}$ |
| | Bi 212 | S | $1\times10^{-7}$ | $1\times10^{-2}$ | $3\times10^{-9}$ | $4\times10^{-4}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-2}$ | $7\times10^{-9}$ | $4\times10^{-4}$ |
| Bromine (35) | Br 82 | S | $1\times10^{-6}$ | $8\times10^{-3}$ | $4\times10^{-8}$ | $3\times10^{-4}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $6\times10^{-9}$ | $4\times10^{-5}$ |
| Cadmium (48) | Cd 109 | S | $5\times10^{-8}$ | $5\times10^{-3}$ | $2\times10^{-9}$ | $2\times10^{-4}$ |
| | | I | $7\times10^{-8}$ | $5\times10^{-3}$ | $3\times10^{-9}$ | $2\times10^{-4}$ |
| | Cd 115 m | S | $4\times10^{-8}$ | $7\times10^{-4}$ | $1\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $4\times10^{-8}$ | $7\times10^{-4}$ | $1\times10^{-9}$ | $3\times10^{-5}$ |
| | Cd 115 | S | $2\times10^{-7}$ | $1\times10^{-3}$ | $8\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $6\times10^{-9}$ | $4\times10^{-5}$ |
| Calcium (20) | Ca 45 | S | $3\times10^{-8}$ | $3\times10^{-4}$ | $1\times10^{-9}$ | $9\times10^{-6}$ |
| | | I | $1\times10^{-7}$ | $5\times10^{-3}$ | $4\times10^{-9}$ | $2\times10^{-4}$ |
| | Ca 47 | S | $2\times10^{-7}$ | $1\times10^{-3}$ | $6\times10^{-9}$ | $5\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $6\times10^{-9}$ | $3\times10^{-5}$ |
| Californium (98) | Cf 249 | S | $2\times10^{-12}$ | $1\times10^{-4}$ | $5\times10^{-14}$ | $4\times10^{-6}$ |
| | | I | $1\times10^{-10}$ | $7\times10^{-4}$ | $\frac{3\times10^{-12}}{[3\times10^{-14}]}$ | $2\times10^{-5}$ |

| Element (Atomic Number) | | Isotope | Table I Column 1 Air (uc/ml) | Table I Column 2 Water (uc/ml) | Table II Column 1 Air (uc/ml) | Table II Column 2 Water (uc/ml) |
|---|---|---|---|---|---|---|
| | Cf 250 | S | $5\times10^{-12}$ | $4\times10^{-4}$ | $\frac{2\times10^{-13}}{[2\times10^{-12}]}$ | $1\times10^{-5}$ |
| | | I | $1\times10^{-10}$ | $7\times10^{-4}$ | $3\times10^{-12}$ | $3\times10^{-5}$ |
| | Cf 251 | S | $2\times10^{-12}$ | $1\times10^{-4}$ | $6\times10^{-14}$ | $4\times10^{-6}$ |
| | | I | $1\times10^{-10}$ | $8\times10^{-4}$ | $3\times10^{-12}$ | $3\times10^{-5}$ |
| | Cf 252 | S | $6\times10^{-12}$ | $2\times10^{-4}$ | $2\times10^{-13}$ | $7\times10^{-6}$ |
| | | I | $3\times10^{-11}$ | $2\times10^{-4}$ | $1\times10^{-12}$ | $7\times10^{-6}$ |
| | Cf 253 | S | $8\times10^{-10}$ | $4\times10^{-3}$ | $3\times10^{-11}$ | $1\times10^{-4}$ |
| | | I | $8\times10^{-10}$ | $4\times10^{-3}$ | $3\times10^{-11}$ | $1\times10^{-4}$ |
| | Cf 254 | S | $5\times10^{-12}$ | $4\times10^{-6}$ | $2\times10^{-13}$ | $1\times10^{-7}$ |
| | | I | $5\times10^{-12}$ | $4\times10^{-6}$ | $2\times10^{-13}$ | $1\times10^{-7}$ |
| Carbon (6) | C 14 | S | $4\times10^{-6}$ | $2\times10^{-2}$ | $1\times10^{-7}$ | $8\times10^{-4}$ |
| | $\underline{Co_2}$ | Sub | $5\times10^{-5}$ | ------ | $1\times10^{-6}$ | ------ |
| Cerium (58) | Ce 141 | S | $4\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $9\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $3\times10^{-3}$ | $5\times10^{-9}$ | $9\times10^{-5}$ |
| | Ce 143 | S | $3\times10^{-7}$ | $1\times10^{-3}$ | $9\times10^{-9}$ | $4\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $7\times10^{-9}$ | $4\times10^{-5}$ |
| | Ce 144 | S | $1\times10^{-8}$ | $3\times10^{-4}$ | $3\times10^{-10}$ | $1\times10^{-5}$ |
| | | I | $6\times10^{-9}$ | $3\times10^{-4}$ | $2\times10^{-10}$ | $1\times10^{-5}$ |
| Cesium (55) | Cs 131 | S | $1\times10^{-5}$ | $7\times10^{-2}$ | $4\times10^{-7}$ | $2\times10^{-3}$ |
| | | I | $3\times10^{-6}$ | $3\times10^{-2}$ | $1\times10^{-7}$ | $9\times10^{-4}$ |
| | Cs 134 M | S | $4\times10^{-5}$ | $2\times10^{-1}$ | $1\times10^{-6}$ | $6\times10^{-3}$ |
| | | I | $6\times10^{-6}$ | $3\times10^{-2}$ | $2\times10^{-7}$ | $1\times10^{-3}$ |
| | Cs 134 | S | $4\times10^{-8}$ | $3\times10^{-4}$ | $1\times10^{-9}$ | $9\times10^{-6}$ |
| | | I | $1\times10^{-8}$ | $1\times10^{-3}$ | $4\times10^{-10}$ | $4\times10^{-5}$ |
| | Cs 135 | S | $5\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $9\times10^{-8}$ | $7\times10^{-3}$ | $3\times10^{-9}$ | $2\times10^{-4}$ |
| | Cs 136 | S | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $9\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $2\times10^{-3}$ | $6\times10^{-9}$ | $6\times10^{-5}$ |
| | Cs 137 | S | $6\times10^{-8}$ | $4\times10^{-4}$ | $2\times10^{-9}$ | $2\times10^{-5}$ |
| | | I | $1\times10^{-8}$ | $1\times10^{-3}$ | $5\times10^{-10}$ | $4\times10^{-5}$ |
| Chlorine (17) | Cl 36 | S | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $8\times10^{-5}$ |
| | | I | $2\times10^{-8}$ | $2\times10^{-3}$ | $8\times10^{-10}$ | $6\times10^{-5}$ |
| | Cl 38 | S | $3\times10^{-6}$ | $1\times10^{-2}$ | $9\times10^{-8}$ | $4\times10^{-4}$ |
| | | I | $2\times10^{-6}$ | $1\times10^{-2}$ | $7\times10^{-8}$ | $4\times10^{-4}$ |
| Chromium (24) | Cr 51 | S | $1\times10^{-5}$ | $5\times10^{-2}$ | $4\times10^{-7}$ | $2\times10^{-3}$ |
| | | I | $2\times10^{-6}$ | $5\times10^{-2}$ | $8\times10^{-8}$ | $2\times10^{-3}$ |
| Cobalt (27) | Co 57 | S | $3\times10^{-6}$ | $2\times10^{-2}$ | $1\times10^{-7}$ | $5\times10^{-4}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-2}$ | $6\times10^{-9}$ | $4\times10^{-4}$ |
| | Co 58 M | S | $2\times10^{-5}$ | $8\times10^{-2}$ | $6\times10^{-7}$ | $3\times10^{-3}$ |
| | | I | $9\times10^{-6}$ | $6\times10^{-2}$ | $3\times10^{-7}$ | $2\times10^{-3}$ |
| | Co 58 | S | $8\times10^{-7}$ | $4\times10^{-3}$ | $3\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $5\times10^{-8}$ | $3\times10^{-3}$ | $2\times10^{-9}$ | $9\times10^{-5}$ |
| | Co 60 | S | $3\times10^{-7}$ | $1\times10^{-3}$ | $1\times10^{-8}$ | $5\times10^{-5}$ |
| | | I | $9\times10^{-9}$ | $1\times10^{-3}$ | $3\times10^{-10}$ | $3\times10^{-5}$ |
| Copper (29) | $\underline{Cu}$ [Co] 64 | S | $2\times10^{-6}$ | $1\times10^{-2}$ | $7\times10^{-8}$ | $3\times10^{-4}$ |
| | | I | $1\times10^{-6}$ | $6\times10^{-3}$ | $4\times10^{-8}$ | $2\times10^{-4}$ |
| Curium (96) | Cm 242 | S | $\frac{1\times10^{-10}}{[2\times10^{-10}]}$ | $7\times10^{-4}$ | $\frac{4\times10^{-12}}{[6\times10^{-12}]}$ | $2\times10^{-5}$ |
| | | I | $2\times10^{-10}$ | $7\times10^{-4}$ | $6\times10^{-12}$ | $2\times10^{-5}$ |
| | Cm 243 | S | $6\times10^{-12}$ | $1\times10^{-4}$ | $2\times10^{-13}$ | $5\times10^{-6}$ |
| | | I | $1\times10^{-10}$ | $7\times10^{-4}$ | $3\times10^{-12}$ | $2\times10^{-5}$ |
| | Cm 244 | S | $9\times10^{-12}$ | $2\times10^{-4}$ | $3\times10^{-13}$ | $7\times10^{-6}$ |
| | | I | $1\times10^{-10}$ | $8\times10^{-4}$ | $3\times10^{-12}$ | $3\times10^{-5}$ |
| | Cm 245 | S | $5\times10^{-12}$ | $1\times10^{-4}$ | $2\times10^{-13}$ | $4\times10^{-6}$ |
| | | I | $1\times10^{-10}$ | $8\times10^{-4}$ | $4\times10^{-12}$ | $3\times10^{-5}$ |
| | Cm 246 | S | $5\times10^{-12}$ | $1\times10^{-4}$ | $2\times10^{-13}$ | $4\times10^{-6}$ |
| | | I | $1\times10^{-10}$ | $8\times10^{-4}$ | $4\times10^{-12}$ | $3\times10^{-5}$ |
| | Cm 247 | S | $5\times10^{-12}$ | $1\times10^{-4}$ | $2\times10^{-13}$ | $4\times10^{-6}$ |
| | | I | $1\times10^{-10}$ | $6\times10^{-4}$ | $4\times10^{-12}$ | $2\times10^{-5}$ |
| | Cm 248 | S | $6\times10^{-13}$ | $1\times10^{-5}$ | $2\times10^{-14}$ | $4\times10^{-7}$ |
| | | I | $1\times10^{-11}$ | $4\times10^{-5}$ | $4\times10^{-13}$ | $1\times10^{-6}$ |
| | Cm 249 | S | $1\times10^{-5}$ | $6\times10^{-2}$ | $4\times10^{-7}$ | $2\times10^{-3}$ |
| | | I | $1\times10^{-5}$ | $6\times10^{-2}$ | $4\times10^{-7}$ | $2\times10^{-3}$ |
| Dysprosium (66) | Dy 165 | S | $3\times10^{-6}$ | $1\times10^{-2}$ | $9\times10^{-8}$ | $4\times10^{-4}$ |
| | | I | $2\times10^{-6}$ | $1\times10^{-2}$ | $7\times10^{-8}$ | $4\times10^{-4}$ |
| | Dy 166 | S | $2\times10^{-7}$ | $1\times10^{-3}$ | $8\times10^{-9}$ | $4\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $7\times10^{-9}$ | $4\times10^{-5}$ |

| Element (Atomic Number) | Isotope | | Table I Column 1 Air (uc/ml) | Table I Column 2 Water (uc/ml) | Table II Column 1 Air (uc/ml) | Table II Column 2 Water (uc/ml) |
|---|---|---|---|---|---|---|
| Einsteinium (99) | Es 253 | S | $8\times10^{-10}$ | $7\times10^{-4}$ | $3\times10^{-11}$ | $2\times10^{-5}$ |
| | | I | $6\times10^{-10}$ | $7\times10^{-4}$ | $2\times10^{-11}$ | $2\times10^{-5}$ |
| | Es 254 M | S | $5\times10^{-9}$ | $5\times10^{-4}$ | $2\times10^{-10}$ | $2\times10^{-5}$ |
| | | I | $6\times10^{-9}$ | $5\times10^{-4}$ | $2\times10^{-10}$ | $2\times10^{-5}$ |
| | Es 254 | S | $2\times10^{-11}$ | $4\times10^{-4}$ | $6\times10^{-13}$ | $1\times10^{-5}$ |
| | | I | $1\times10^{-10}$ | $4\times10^{-4}$ | $4\times10^{-12}$ | $1\times10^{-5}$ |
| | Es 255 | S | $5\times10^{-10}$ | $8\times10^{-4}$ | $2\times10^{-11}$ | $3\times10^{-5}$ |
| | | I | $4\times10^{-10}$ | $8\times10^{-4}$ | $1\times10^{-11}$ | $3\times10^{-5}$ |
| Erbium (68) | Er 169 | S | $6\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $9\times10^{-5}$ |
| | | I | $4\times10^{-7}$ | $3\times10^{-3}$ | $1\times10^{-8}$ | $9\times10^{-5}$ |
| | Er 171 | S | $7\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $6\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| Europium (63) | Eu 152 (T/2=9.2 Hrs.) | S | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $6\times10^{-5}$ |
| | | I | $3\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $6\times10^{-5}$ |
| | Eu 152 (T/2= 13 Hrs.) | S | $1\times10^{-8}$ | $2\times10^{-3}$ | $4\times10^{-10}$ | $8\times10^{-5}$ |
| | | I | $2\times10^{-8}$ | $2\times10^{-3}$ | $6\times10^{-10}$ | $8\times10^{-5}$ |
| | Eu 154 | S | $4\times10^{-9}$ | $6\times10^{-4}$ | $1\times10^{-10}$ | $2\times10^{-5}$ |
| | | I | $7\times10^{-9}$ | $6\times10^{-4}$ | $2\times10^{-10}$ | $2\times10^{-5}$ |
| | Eu 155 | S | $9\times10^{-8}$ | $6\times10^{-3}$ | $3\times10^{-9}$ | $2\times10^{-4}$ |
| | | I | $7\times10^{-8}$ | $6\times10^{-3}$ | $3\times10^{-9}$ | $2\times10^{-4}$ |
| Fermium (100) | Fm 254 | S | $6\times10^{-8}$ | $4\times10^{-3}$ | $2\times10^{-9}$ | $1\times10^{-4}$ |
| | | I | $7\times10^{-8}$ | $4\times10^{-3}$ | $2\times10^{-9}$ | $1\times10^{-4}$ |
| | Fm 255 | S | $2\times10^{-8}$ | $1\times10^{-3}$ | $6\times10^{-10}$ | $3\times10^{-5}$ |
| | | I | $1\times10^{-8}$ | $1\times10^{-3}$ | $4\times10^{-10}$ | $3\times10^{-5}$ |
| | Fm 256 | S | $3\times10^{-9}$ | $3\times10^{-5}$ | $1\times10^{-10}$ | $9\times10^{-7}$ |
| | | I | $2\times10^{-9}$ | $3\times10^{-5}$ | $6\times10^{-11}$ | $9\times10^{-7}$ |
| Flourine (9) | F 18 | S | $5\times10^{-6}$ | $2\times10^{-2}$ | $2\times10^{-7}$ | $8\times10^{-4}$ |
| | | I | $3\times10^{-6}$ | $1\times10^{-2}$ | $9\times10^{-8}$ | $5\times10^{-4}$ |
| Gadolinium (64) | Gd 153 | S | $2\times10^{-7}$ | $6\times10^{-3}$ | $8\times10^{-9}$ | $2\times10^{-4}$ |
| | | I | $9\times10^{-8}$ | $6\times10^{-3}$ | $3\times10^{-9}$ | $2\times10^{-4}$ |
| | Gd 159 | S | $5\times10^{-7}$ | $2\times10^{-3}$ | $2\times10^{-8}$ | $8\times10^{-5}$ |
| | | I | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $8\times10^{-5}$ |
| Gallium (31) | Ga 72 | S | $2\times10^{-7}$ | $1\times10^{-3}$ | $8\times10^{-9}$ | $4\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $6\times10^{-9}$ | $4\times10^{-5}$ |
| Germanium (32) | Ge 68 | S | $4\times10^{-6}$ | $2\times10^{-2}$ | $1\times10^{-7}$ | $8\times10^{-4}$ |
| | | I | $1\times10^{-8}$ | ------ | $5\times10^{-10}$ | ------ |
| | Ge 71 | S | $1\times10^{-5}$ | $5\times10^{-2}$ | $4\times10^{-7}$ | $2\times10^{-3}$ |
| | | I | $6\times10^{-6}$ | $5\times10^{-2}$ | $2\times10^{-7}$ | $2\times10^{-3}$ |
| Gold (79) | Au 195 | S | $8\times10^{-6}$ | $4\times10^{-2}$ | $3\times10^{-7}$ | $1\times10^{-3}$ |
| | | I | $6\times10^{-8}$ | $6\times10^{-3}$ | $2\times10^{-9}$ | $2\times10^{-4}$ |
| | Au 196 | S | $1\times10^{-6}$ | $5\times10^{-3}$ | $4\times10^{-8}$ | $2\times10^{-4}$ |
| | | I | $6\times10^{-7}$ | $4\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | Au 198 | S | $3\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $5\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $8\times10^{-9}$ | $5\times10^{-5}$ |
| | Au 199 | S | $1\times10^{-6}$ | $5\times10^{-3}$ | $4\times10^{-8}$ | $2\times10^{-4}$ |
| | | I | $8\times10^{-7}$ | $4\times10^{-3}$ | $3\times10^{-8}$ | $2\times10^{-4}$ |
| Hafnium (72) | Hf 181 | S | $4\times10^{-8}$ | $2\times10^{-3}$ | $1\times10^{-9}$ | $7\times10^{-5}$ |
| | | I | $7\times10^{-8}$ | $2\times10^{-3}$ | $3\times10^{-9}$ | $7\times10^{-5}$ |
| Holmium (67) | Ho 166 | S | $2\times10^{-7}$ | $9\times10^{-4}$ | $7\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $9\times10^{-4}$ | $6\times10^{-9}$ | $3\times10^{-5}$ |
| Hydrogen (1) | H 3 | S | $5\times10^{-6}$ | $1\times10^{-1}$ | $2\times10^{-7}$ | $3\times10^{-3}$ |
| | | I | $5\times10^{-6}$ | $1\times10^{-1}$ | $2\times10^{-7}$ | $3\times10^{-3}$ |
| | | Sub | $2\times10^{-3}$ | ------ | $4\times10^{-5}$ | ------ |
| Indium (49) | In 113 M | S | $8\times10^{-6}$ | $4\times10^{-2}$ | $3\times10^{-7}$ | $1\times10^{-3}$ |
| | | I | $7\times10^{-6}$ | $4\times10^{-2}$ | $2\times10^{-7}$ | $1\times10^{-3}$ |
| | In 114 M | S | $1\times10^{-7}$ | $5\times10^{-4}$ | $4\times10^{-9}$ | $2\times10^{-5}$ |
| | | I | $2\times10^{-8}$ | $5\times10^{-4}$ | $7\times10^{-10}$ | $2\times10^{-5}$ |
| | In 115 M | S | $2\times10^{-6}$ | $1\times10^{-2}$ | $8\times10^{-8}$ | $4\times10^{-4}$ |
| | | I | $2\times10^{-6}$ | $1\times10^{-2}$ | $6\times10^{-8}$ | $4\times10^{-4}$ |
| | In 115 | S | $2\times10^{-7}$ | $3\times10^{-3}$ | $9\times10^{-9}$ | $9\times10^{-5}$ |
| | | I | $3\times10^{-8}$ | $3\times10^{-3}$ | $1\times10^{-9}$ | $9\times10^{-5}$ |
| Iodine (53) | I 125 | S | $5\times10^{-9}$ | $4\times10^{-5}$ | $8\times10^{-11}$ | $2\times10^{-7}$ |
| | | I | $2\times10^{-7}$ | $6\times10^{-3}$ | $6\times10^{-9}$ | $2\times10^{-4}$ |
| | I 126 | S | $8\times10^{-9}$ | $5\times10^{-5}$ | $9\times10^{-11}$ | $3\times10^{-7}$ |
| | | I | $3\times10^{-7}$ | $3\times10^{-3}$ | $1\times10^{-8}$ | $9\times10^{-5}$ |
| | I 129 | S | $2\times10^{-9}$ | $1\times10^{-5}$ | $2\times10^{-11}$ | $6\times10^{-8}$ |
| | | I | $7\times10^{-8}$ | $6\times10^{-3}$ | $2\times10^{-9}$ | $2\times10^{-4}$ |

| Element (Atomic Number) | Isotope | | Table I Column 1 Air (uc/ml) | Table I Column 2 Water (uc/ml) | Table II Column 1 Air (uc/ml) | Table II Column 2 Water (uc/ml) |
|---|---|---|---|---|---|---|
| | I 131 | S | $9\times10^{-9}$ | $6\times10^{-5}$ | $1\times10^{-10}$ | $3\times10^{-7}$ |
| | | I | $3\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $6\times10^{-5}$ |
| | I 132 | S | $2\times10^{-7}$ | $2\times10^{-3}$ | $3\times10^{-9}$ | $8\times10^{-6}$ |
| | | I | $9\times10^{-7}$ | $5\times10^{-3}$ | $3\times10^{-8}$ | $2\times10^{-4}$ |
| | I 133 | S | $3\times10^{-8}$ | $2\times10^{-4}$ | $4\times10^{-10}$ | $1\times10^{-6}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $7\times10^{-9}$ | $4\times10^{-5}$ |
| | I 134 | S | $5\times10^{-7}$ | $4\times10^{-3}$ | $6\times10^{-9}$ | $2\times10^{-5}$ |
| | | I | $3\times10^{-6}$ | $2\times10^{-2}$ | $1\times10^{-7}$ | $6\times10^{-4}$ |
| | I 135 | S | $1\times10^{-7}$ | $7\times10^{-4}$ | $1\times10^{-9}$ | $4\times10^{-6}$ |
| | | I | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $7\times10^{-5}$ |
| Iridium (77) | Ir 190 | S | $1\times10^{-6}$ | $6\times10^{-3}$ | $4\times10^{-8}$ | $2\times10^{-4}$ |
| | | I | $4\times10^{-7}$ | $5\times10^{-3}$ | $1\times10^{-8}$ | $2\times10^{-4}$ |
| | Ir 192 | S | $1\times10^{-7}$ | $1\times10^{-3}$ | $4\times10^{-9}$ | $4\times10^{-5}$ |
| | | I | $3\times10^{-8}$ | $1\times10^{-3}$ | $9\times10^{-10}$ | $4\times10^{-5}$ |
| | Ir 194 | S | $2\times10^{-7}$ | $1\times10^{-3}$ | $8\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $9\times10^{-4}$ | $5\times10^{-9}$ | $3\times10^{-5}$ |
| Iron (26) | Fe 55 | S | $9\times10^{-7}$ | $2\times10^{-2}$ | $3\times10^{-8}$ | $8\times10^{-4}$ |
| | | I | $1\times10^{-6}$ | $7\times10^{-2}$ | $3\times10^{-8}$ | $2\times10^{-3}$ |
| | Fe 59 | S | $1\times10^{-7}$ | $2\times10^{-3}$ | $5\times10^{-9}$ | $6\times10^{-5}$ |
| | | I | $5\times10^{-8}$ | $2\times10^{-3}$ | $2\times10^{-9}$ | $5\times10^{-5}$ |
| Krypton (36) | KR 85 M | Sub | $6\times10^{-6}$ | ------ | $1\times10^{-7}$ | ------ |
| | Kr 85 | Sub | $1\times10^{-5}$ | ------ | $3\times10^{-7}$ | ------ |
| | Kr 87 | Sub | $1\times10^{-6}$ | ------ | $2\times10^{-8}$ | ------ |
| | Kr 88 | Sub | $1\times10^{-6}$ | ------ | $2\times10^{-8}$ | ------ |
| Lanthanum (57) | La 140 | S | $2\times10^{-7}$ | $7\times10^{-4}$ | $5\times10^{-9}$ | $2\times10^{-5}$ |
| | | I | $1\times10^{-7}$ | $7\times10^{-4}$ | $4\times10^{-9}$ | $2\times10^{-5}$ |
| Lead (82) | Pb 203 | S | $3\times10^{-6}$ | $1\times10^{-2}$ | $9\times10^{-8}$ | $4\times10^{-4}$ |
| | | I | $2\times10^{-6}$ | $1\times10^{-2}$ | $6\times10^{-8}$ | $4\times10^{-4}$ |
| | Pb 210 | S | $1\times10^{-10}$ | $4\times10^{-6}$ | $4\times10^{-12}$ | $1\times10^{-7}$ |
| | | I | $2\times10^{-10}$ | $5\times10^{-3}$ | $8\times10^{-12}$ | $2\times10^{-4}$ |
| | Pb 212 | S | $2\times10^{-8}$ | $6\times10^{-4}$ | $6\times10^{-10}$ | $2\times10^{-5}$ |
| | | I | $2\times10^{-8}$ | $5\times10^{-4}$ | $7\times10^{-10}$ | $2\times10^{-5}$ |
| Lutetium (71) | Lu 177 | S | $6\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $5\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| Manganese (25) | Mn 52 | S | $2\times10^{-7}$ | $1\times10^{-3}$ | $7\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $1\times10^{-7}$ | $9\times10^{-4}$ | $5\times10^{-9}$ | $3\times10^{-5}$ |
| | Mn 54 | S | $4\times10^{-7}$ | $4\times10^{-3}$ | $1\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $4\times10^{-8}$ | $3\times10^{-3}$ | $1\times10^{-9}$ | $1\times10^{-4}$ |
| | Mn 56 | S | $8\times10^{-7}$ | $4\times10^{-3}$ | $3\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $5\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| Mercury (80) | Hg 197 M | S | $7\times10^{-7}$ | $6\times10^{-3}$ | $3\times10^{-8}$ | $2\times10^{-4}$ |
| | | I | $8\times10^{-7}$ | $5\times10^{-3}$ | $3\times10^{-8}$ | $2\times10^{-4}$ |
| | Hg 197 | S | $1\times10^{-6}$ | $9\times10^{-3}$ | $4\times10^{-8}$ | $3\times10^{-4}$ |
| | | I | $3\times10^{-6}$ | $1\times10^{-2}$ | $9\times10^{-8}$ | $5\times10^{-4}$ |
| | Hg 203 | S | $7\times10^{-8}$ | $5\times10^{-4}$ | $2\times10^{-9}$ | $2\times10^{-5}$ |
| | | I | $1\times10^{-7}$ | $3\times10^{-3}$ | $4\times10^{-9}$ | $1\times10^{-4}$ |
| Molybdenum (42) | Mo 99 | S | $7\times10^{-7}$ | $5\times10^{-3}$ | $3\times10^{-8}$ | $2\times10^{-4}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $7\times10^{-9}$ | $4\times10^{-5}$ |
| Neodymium (60) | Nd 144 | S | $8\times10^{-11}$ | $2\times10^{-3}$ | $3\times10^{-12}$ | $7\times10^{-5}$ |
| | | I | $3\times10^{-10}$ | $2\times10^{-3}$ | $1\times10^{-11}$ | $8\times10^{-5}$ |
| | Nd 147 | S | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $6\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $2\times10^{-3}$ | $8\times10^{-9}$ | $6\times10^{-5}$ |
| | Nd 149 | S | $2\times10^{-6}$ | $8\times10^{-3}$ | $6\times10^{-8}$ | $3\times10^{-4}$ |
| | | I | $1\times10^{-6}$ | $8\times10^{-3}$ | $5\times10^{-8}$ | $3\times10^{-4}$ |
| Neptunium (93) | Np 237 | S | $4\times10^{-12}$ | $9\times10^{-5}$ | $1\times10^{-13}$ | $3\times10^{-6}$ |
| | | I | $1\times10^{-10}$ | $9\times10^{-4}$ | $4\times10^{-12}$ | $3\times10^{-5}$ |
| | Np 239 | S | $8\times10^{-7}$ | $4\times10^{-3}$ | $3\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $7\times10^{-7}$ | $4\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| Nickel (28) | Ni 59 | S | $5\times10^{-7}$ | $6\times10^{-3}$ | $2\times10^{-8}$ | $2\times10^{-4}$ |
| | | I | $8\times10^{-7}$ | $6\times10^{-2}$ | $3\times10^{-8}$ | $2\times10^{-3}$ |
| | Ni 63 | S | $6\times10^{-8}$ | $8\times10^{-4}$ | $2\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $3\times10^{-7}$ | $2\times10^{-2}$ | $1\times10^{-8}$ | $7\times10^{-4}$ |
| | Ni 65 | S | $9\times10^{-7}$ | $4\times10^{-3}$ | $3\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $5\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| Niobium [(Columbium)] (41) | Nb 93 M | S | $1\times10^{-7}$ | $1\times10^{-2}$ | $4\times10^{-9}$ | $4\times10^{-4}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-2}$ | $5\times10^{-9}$ | $4\times10^{-4}$ |
| | Nb 95 | S | $5\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $5\times10^{-6}$ | $3\times10^{-2}$ | $2\times10^{-7}$ | $9\times10^{-4}$ |

| Element (Atomic Number) | Isotope | | Table I Column 1 Air (uc/ml) | Table I Column 2 Water (uc/ml) | Table II Column 1 Air (uc/ml) | Table II Column 2 Water (uc/ml) |
|---|---|---|---|---|---|---|
| | Nb 97 | S | $6\times10^{-6}$ | $3\times10^{-2}$ | $2\times10^{-7}$ | $9\times10^{-4}$ |
| | | I | $5\times10^{-6}$ | $3\times10^{-2}$ | $2\times10^{-7}$ | $9\times10^{-4}$ |
| Osmium (76) | Os 185 | S | $5\times10^{-7}$ | $2\times10^{-3}$ | $2\times10^{-8}$ | $7\times10^{-5}$ |
| | | I | $5\times10^{-8}$ | $2\times10^{-3}$ | $2\times10^{-9}$ | $7\times10^{-5}$ |
| | Os 191 M | S | $2\times10^{-5}$ | $7\times10^{-2}$ | $6\times10^{-7}$ | $3\times10^{-3}$ |
| | | I | $9\times10^{-6}$ | $7\times10^{-2}$ | $3\times10^{-7}$ | $2\times10^{-3}$ |
| | Os 191 | S | $1\times10^{-6}$ | $5\times10^{-3}$ | $4\times10^{-8}$ | $2\times10^{-4}$ |
| | | I | $4\times10^{-7}$ | $5\times10^{-3}$ | $1\times10^{-8}$ | $2\times10^{-4}$ |
| | Os 193 | S | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $6\times10^{-5}$ |
| | | I | $3\times10^{-7}$ | $2\times10^{-3}$ | $9\times10^{-9}$ | $5\times10^{-5}$ |
| Palladium (46) | Pd 103 | S | $1\times10^{-6}$ | $1\times10^{-2}$ | $5\times10^{-8}$ | $3\times10^{-4}$ |
| | | I | $7\times10^{-7}$ | $8\times10^{-3}$ | $3\times10^{-8}$ | $3\times10^{-4}$ |
| | Pd 109 | S | $6\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $9\times10^{-5}$ |
| | | I | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $7\times10^{-5}$ |
| Phosphorus (15) | P 32 | S | $7\times10^{-8}$ | $5\times10^{-4}$ | $2\times10^{-9}$ | $2\times10^{-5}$ |
| | | I | $8\times10^{-8}$ | $7\times10^{-4}$ | $3\times10^{-9}$ | $2\times10^{-5}$ |
| Platinum (78) | Pt 191 | S | $8\times10^{-7}$ | $4\times10^{-3}$ | $3\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $6\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | Pt 193 M | S | $\underline{7\times10^{-6}}$ [$1\times10^{-6}$] | $3\times10^{-2}$ | $\underline{2\times10^{-7}}$ [$4\times10^{-8}$] | $\underline{1\times10^{-3}}$ [$9\times10^{-4}$] |
| | | I | $\underline{5\times10^{-6}}$ [$3\times10^{-7}$] | $\underline{3\times10^{-2}}$ [$5\times10^{-2}$] | $\underline{2\times10^{-7}}$ [$1\times10^{-8}$] | $\underline{1\times10^{-3}}$ [$2\times10^{-3}$] |
| | Pt 193 | S | $\underline{1\times10^{-6}}$ | $\underline{3\times10^{-2}}$ | $\underline{4\times10^{-8}}$ | $\underline{9\times10^{-4}}$ |
| | | I | $\underline{3\times10^{-7}}$ | $\underline{5\times10^{-2}}$ | $\underline{1\times10^{-8}}$ | $\underline{2\times10^{-3}}$ |
| | Pt 197 M | S | $6\times10^{-6}$ | $3\times10^{-2}$ | $2\times10^{-7}$ | $1\times10^{-3}$ |
| | | I | $5\times10^{-6}$ | $3\times10^{-2}$ | $2\times10^{-7}$ | $9\times10^{-4}$ |
| | Pt 197 | S | $8\times10^{-7}$ | $4\times10^{-3}$ | $3\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $6\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| Plutonium (94) | Pu 238 | S | $2\times10^{-12}$ | $1\times10^{-4}$ | $7\times10^{-14}$ | $5\times10^{-6}$ |
| | | I | $3\times10^{-11}$ | $8\times10^{-4}$ | $1\times10^{-12}$ | $3\times10^{-5}$ |
| | Pu 239 | S | $2\times10^{-12}$ | $1\times10^{-4}$ | $6\times10^{-14}$ | $5\times10^{-6}$ |
| | | I | $4\times10^{-11}$ | $8\times10^{-4}$ | $1\times10^{-12}$ | $3\times10^{-5}$ |
| | Pu 240 | S | $2\times10^{-12}$ | $1\times10^{-4}$ | $6\times10^{-14}$ | $5\times10^{-6}$ |
| | | I | $4\times10^{-11}$ | $8\times10^{-4}$ | $1\times10^{-12}$ | $3\times10^{-5}$ |
| | Pu 241 | S | $9\times10^{-11}$ | $7\times10^{-3}$ | $3\times10^{-12}$ | $2\times10^{-4}$ |
| | | I | $4\times10^{-8}$ | $4\times10^{-2}$ | $1\times10^{-9}$ | $1\times10^{-3}$ |
| | Pu 242 | S | $2\times10^{-12}$ | $1\times10^{-4}$ | $6\times10^{-14}$ | $5\times10^{-6}$ |
| | | I | $4\times10^{-11}$ | $9\times10^{-4}$ | $1\times10^{-12}$ | $3\times10^{-5}$ |
| | Pu 243 | S | $2\times10^{-6}$ | $1\times10^{-2}$ | $6\times10^{-8}$ | $3\times10^{-4}$ |
| | | I | $2\times10^{-6}$ | $1\times10^{-2}$ | $8\times10^{-8}$ | $3\times10^{-4}$ |
| | Pu 244 | S | $2\times10^{-12}$ | $1\times10^{-4}$ | $6\times10^{-14}$ | $4\times10^{-6}$ |
| | | I | $3\times10^{-11}$ | $3\times10^{-4}$ | $1\times10^{-12}$ | $1\times10^{-5}$ |
| Polonium (84) | Po 210 | S | $5\times10^{-10}$ | $2\times10^{-5}$ | $2\times10^{-11}$ | $7\times10^{-7}$ |
| | | I | $2\times10^{-10}$ | $8\times10^{-4}$ | $7\times10^{-12}$ | $3\times10^{-5}$ |
| Potassium (19) | K 42 | S | $2\times10^{-6}$ | $9\times10^{-3}$ | $7\times10^{-8}$ | $3\times10^{-4}$ |
| | | I | $1\times10^{-7}$ | $6\times10^{-4}$ | $4\times10^{-9}$ | $2\times10^{-5}$ |
| Praseodymium (59) | Pr 142 | S | $2\times10^{-7}$ | $9\times10^{-4}$ | $7\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $9\times10^{-4}$ | $5\times10^{-9}$ | $3\times10^{-5}$ |
| | Pr 143 | S | $3\times10^{-7}$ | $1\times10^{-3}$ | $1\times10^{-8}$ | $5\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $6\times10^{-9}$ | $5\times10^{-5}$ |
| Promethium (61) | Pm 147 | S | $6\times10^{-8}$ | $6\times10^{-3}$ | $2\times10^{-9}$ | $2\times10^{-4}$ |
| | | I | $1\times10^{-7}$ | $6\times10^{-3}$ | $3\times10^{-9}$ | $2\times10^{-4}$ |
| | Pm 149 | S | $3\times10^{-7}$ | $1\times10^{-3}$ | $1\times10^{-8}$ | $4\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $8\times10^{-9}$ | $4\times10^{-5}$ |
| Protactinum (91) | Pa 230 | S | $2\times10^{-9}$ | $7\times10^{-3}$ | $6\times10^{-11}$ | $2\times10^{-4}$ |
| | | I | $8\times10^{-10}$ | $7\times10^{-3}$ | $3\times10^{-11}$ | $2\times10^{-4}$ |
| | Pa 231 | S | $1\times10^{-12}$ | $3\times10^{-5}$ | $4\times10^{-14}$ | $9\times10^{-7}$ |
| | | I | $1\times10^{-10}$ | $8\times10^{-4}$ | $4\times10^{-12}$ | $2\times10^{-5}$ |
| | Pa 233 | S | $6\times10^{-7}$ | $4\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $2\times10^{-7}$ | $3\times10^{-3}$ | $6\times10^{-9}$ | $1\times10^{-4}$ |
| Radium (88) | Ra 223 | S | $2\times10^{-9}$ | $2\times10^{-5}$ | $6\times10^{-11}$ | $7\times10^{-7}$ |
| | | I | $2\times10^{-10}$ | $1\times10^{-4}$ | $8\times10^{-12}$ | $4\times10^{-6}$ |
| | Ra 224 | S | $5\times10^{-9}$ | $7\times10^{-5}$ | $2\times10^{-10}$ | $2\times10^{-6}$ |
| | | I | $7\times10^{-10}$ | $2\times10^{-4}$ | $2\times10^{-11}$ | $5\times10^{-6}$ |
| | Ra 226 | S | $3\times10^{-11}$ | $4\times10^{-7}$ | $3\times10^{-12}$ | $3\times10^{-8}$ |
| | | I | $5\times10^{-11}$ | $9\times10^{-4}$ | $2\times10^{-12}$ | $3\times10^{-5}$ |
| | Ra 228 | S | $7\times10^{-11}$ | $8\times10^{-7}$ | $2\times10^{-12}$ | $3\times10^{-8}$ |
| | | I | $4\times10^{-11}$ | $7\times10^{-4}$ | $1\times10^{-12}$ | $3\times10^{-5}$ |

| Element (Atomic Number) | | Isotope | Table I Column 1 Air (uc/ml) | Table I Column 2 Water (uc/ml) | Table II Column 1 Air (uc/ml) | Table II Column 2 Water (uc/ml) |
|---|---|---|---|---|---|---|
| Radon (86) | Rn 220 | S | $3\times10^{-7}$ | ------ | $1\times10^{-8}$ | ------ |
| | | I | ------ | ------ | ------ | ------ |
| | Rn 222 | S | $\underline{3\times10^{-8}}$ [$1\times10^{-7}$] | ------ | $3\times10^{-9}$ | ------ |
| Rhenium (75) | Re 183 | S | $3\times10^{-6}$ | $2\times10^{-2}$ | $9\times10^{-8}$ | $6\times10^{-4}$ |
| | | I | $2\times10^{-7}$ | $8\times10^{-3}$ | $5\times10^{-9}$ | $3\times10^{-4}$ |
| | Re 186 | S | $6\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $9\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $8\times10^{-9}$ | $5\times10^{-5}$ |
| | Re 187 | S | $9\times10^{-6}$ | $7\times10^{-2}$ | $3\times10^{-7}$ | $3\times10^{-3}$ |
| | | I | $5\times10^{-7}$ | $4\times10^{-2}$ | $2\times10^{-8}$ | $2\times10^{-3}$ |
| | Re 188 | S | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $6\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $9\times10^{-4}$ | $6\times10^{-9}$ | $3\times10^{-5}$ |
| Rhodium (45) | Rh 103 M | S | $8\times10^{-5}$ | $4\times10^{-1}$ | $3\times10^{-6}$ | $1\times10^{-2}$ |
| | | I | $6\times10^{-5}$ | $3\times10^{-1}$ | $2\times10^{-6}$ | $1\times10^{-2}$ |
| | Rh 105 | S | $8\times10^{-7}$ | $4\times10^{-3}$ | $3\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $5\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| Rubidium (37) | Rb 86 | S | $3\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $7\times10^{-5}$ |
| | | I | $7\times10^{-8}$ | $7\times10^{-4}$ | $2\times10^{-9}$ | $2\times10^{-5}$ |
| | Rb 87 | S | $5\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $7\times10^{-8}$ | $5\times10^{-3}$ | $2\times10^{-9}$ | $2\times10^{-4}$ |
| Ruthenium (44) | Ru 97 | S | $2\times10^{-6}$ | $1\times10^{-2}$ | $8\times10^{-8}$ | $4\times10^{-4}$ |
| | | I | $2\times10^{-6}$ | $1\times10^{-2}$ | $6\times10^{-8}$ | $3\times10^{-4}$ |
| | Ru 103 | S | $5\times10^{-7}$ | $2\times10^{-3}$ | $2\times10^{-8}$ | $8\times10^{-5}$ |
| | | I | $8\times10^{-8}$ | $2\times10^{-3}$ | $3\times10^{-9}$ | $8\times10^{-5}$ |
| | Ru 105 | S | $7\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $5\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | Ru 106 | S | $8\times10^{-8}$ | $4\times10^{-4}$ | $3\times10^{-9}$ | $1\times10^{-5}$ |
| | | I | $6\times10^{-9}$ | $3\times10^{-4}$ | $2\times10^{-10}$ | $1\times10^{-5}$ |
| Samarium (62) | Sm 147 | S | $7\times10^{-11}$ | $2\times10^{-3}$ | $2\times10^{-12}$ | $6\times10^{-5}$ |
| | | I | $3\times10^{-10}$ | $2\times10^{-3}$ | $9\times10^{-12}$ | $7\times10^{-5}$ |
| | Sm 151 | S | $6\times10^{-8}$ | $1\times10^{-2}$ | $2\times10^{-9}$ | $4\times10^{-4}$ |
| | | I | $1\times10^{-7}$ | $1\times10^{-2}$ | $5\times10^{-9}$ | $4\times10^{-4}$ |
| | Sm 153 | S | $5\times10^{-7}$ | $2\times10^{-3}$ | $2\times10^{-8}$ | $8\times10^{-5}$ |
| | | I | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $8\times10^{-5}$ |
| Scandium (21) | Sc 46 | S | $2\times10^{-7}$ | $1\times10^{-3}$ | $8\times10^{-9}$ | $4\times10^{-5}$ |
| | | I | $2\times10^{-8}$ | $1\times10^{-3}$ | $8\times10^{-10}$ | $4\times10^{-5}$ |
| | Sc 47 | S | $6\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $9\times10^{-5}$ |
| | | I | $5\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $9\times10^{-5}$ |
| | Sc 48 | S | $2\times10^{-7}$ | $8\times10^{-4}$ | $6\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $1\times10^{-7}$ | $8\times10^{-4}$ | $5\times10^{-9}$ | $3\times10^{-5}$ |
| Selenium (34) | Se 75 | S | $1\times10^{-6}$ | $9\times10^{-3}$ | $4\times10^{-8}$ | $3\times10^{-4}$ |
| | | I | $1\times10^{-7}$ | $8\times10^{-3}$ | $4\times10^{-9}$ | $3\times10^{-4}$ |
| Silicon (14) | Si 31 | S | $6\times10^{-6}$ | $3\times10^{-2}$ | $2\times10^{-7}$ | $9\times10^{-4}$ |
| | | I | $1\times10^{-6}$ | $6\times10^{-3}$ | $3\times10^{-8}$ | $2\times10^{-4}$ |
| Silver (47) | Ag 105 | S | $6\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $8\times10^{-8}$ | $3\times10^{-3}$ | $3\times10^{-9}$ | $1\times10^{-4}$ |
| | Ag 110 M | S | $2\times10^{-7}$ | $9\times10^{-4}$ | $7\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $1\times10^{-8}$ | $9\times10^{-4}$ | $3\times10^{-10}$ | $3\times10^{-5}$ |
| | Ag 111 | S | $3\times10^{-7}$ | $1\times10^{-3}$ | $1\times10^{-8}$ | $4\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $8\times10^{-9}$ | $4\times10^{-5}$ |
| Sodium (11) | Na 22 | S | $2\times10^{-7}$ | $1\times10^{-3}$ | $6\times10^{-9}$ | $4\times10^{-5}$ |
| | | I | $9\times10^{-9}$ | $9\times10^{-4}$ | $3\times10^{-10}$ | $3\times10^{-5}$ |
| | Na 24 | S | $1\times10^{-6}$ | $6\times10^{-3}$ | $4\times10^{-8}$ | $2\times10^{-4}$ |
| | | I | $1\times10^{-7}$ | $8\times10^{-4}$ | $5\times10^{-9}$ | $3\times10^{-3}$ |
| Strontium (38) | Sr 85 M | S | $4\times10^{-5}$ | $2\times10^{-1}$ | $1\times10^{-6}$ | $7\times10^{-3}$ |
| | | I | $3\times10^{-5}$ | $2\times10^{-1}$ | $1\times10^{-6}$ | $7\times10^{-3}$ |
| | Sr 85 | S | $2\times10^{-7}$ | $3\times10^{-3}$ | $8\times10^{-9}$ | $1\times10^{-4}$ |
| | | I | $1\times10^{-7}$ | $5\times10^{-3}$ | $4\times10^{-9}$ | $2\times10^{-4}$ |
| | Sr 89 | S | $3\times10^{-8}$ | $3\times10^{-4}$ | $3\times10^{-10}$ | $3\times10^{-6}$ |
| | | I | $4\times10^{-8}$ | $8\times10^{-4}$ | $1\times10^{-9}$ | $3\times10^{-5}$ |
| | Sr 90 | S | $1\times10^{-9}$ | $1\times10^{-5}$ | $3\times10^{-11}$ | $3\times10^{-7}$ |
| | | I | $5\times10^{-9}$ | $1\times10^{-3}$ | $2\times10^{-10}$ | $4\times10^{-5}$ |
| | Sr 91 | S | $4\times10^{-7}$ | $2\times10^{-3}$ | $2\times10^{-8}$ | $7\times10^{-5}$ |
| | | I | $3\times10^{-7}$ | $1\times10^{-3}$ | $9\times10^{-9}$ | $5\times10^{-5}$ |
| | Sr 92 | S | $4\times10^{-7}$ | $2\times10^{-3}$ | $2\times10^{-8}$ | $7\times10^{-5}$ |
| | | I | $3\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $6\times10^{-5}$ |
| Sulplur (16) | S 35 | S | $3\times10^{-7}$ | $2\times10^{-3}$ | $9\times10^{-9}$ | $6\times10^{-5}$ |
| | | I | $3\times10^{-7}$ | $8\times10^{-3}$ | $9\times10^{-9}$ | $3\times10^{-4}$ |

| Element (Atomic Number) | | Isotope | Table I Column 1 Air (uc/ml) | Table I Column 2 Water (uc/ml) | Table II Column 1 Air (uc/ml) | Table II Column 2 Water (uc/ml) |
|---|---|---|---|---|---|---|
| Tantalum (73) | Ta 182 | S | $4\times10^{-8}$ | $1\times10^{-3}$ | $1\times10^{-9}$ | $4\times10^{-5}$ |
| | | I | $2\times10^{-8}$ | $1\times10^{-3}$ | $7\times10^{-10}$ | $4\times10^{-5}$ |
| Technetium (43) | Tc 96 M | S | $8\times10^{-5}$ | $4\times10^{-1}$ | $3\times10^{-6}$ | $1\times10^{-2}$ |
| | | I | $3\times10^{-5}$ | $3\times10^{-1}$ | $1\times10^{-6}$ | $1\times10^{-2}$ |
| | Tc 96 | S | $6\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $8\times10^{-9}$ | $5\times10^{-5}$ |
| | Tc 97 M | S | $2\times10^{-6}$ | $1\times10^{-2}$ | $8\times10^{-8}$ | $4\times10^{-4}$ |
| | | I | $2\times10^{-7}$ | $5\times10^{-3}$ | $5\times10^{-9}$ | $2\times10^{-4}$ |
| | Tc 97 | S | $1\times10^{-5}$ | $5\times10^{-2}$ | $4\times10^{-7}$ | $2\times10^{-3}$ |
| | | I | $3\times10^{-7}$ | $2\times10^{-2}$ | $1\times10^{-8}$ | $8\times10^{-4}$ |
| | Tc 99 M | S | $4\times10^{-5}$ | $2\times10^{-1}$ | $1\times10^{-6}$ | $6\times10^{-3}$ |
| | | I | $1\times10^{-5}$ | $8\times10^{-2}$ | $5\times10^{-7}$ | $3\times10^{-3}$ |
| | Tc 99 | S | $2\times10^{-6}$ | $1\times10^{-2}$ | $7\times10^{-8}$ | $3\times10^{-4}$ |
| | | I | $6\times10^{-8}$ | $5\times10^{-3}$ | $2\times10^{-9}$ | $2\times10^{-4}$ |
| Tellurium (52) | Te 125 M | S | $4\times10^{-7}$ | $5\times10^{-3}$ | $1\times10^{-8}$ | $2\times10^{-4}$ |
| | | I | $1\times10^{-7}$ | $3\times10^{-3}$ | $4\times10^{-9}$ | $1\times10^{-4}$ |
| | Te 127 M | S | $1\times10^{-7}$ | $2\times10^{-3}$ | $5\times10^{-9}$ | $6\times10^{-5}$ |
| | | I | $4\times10^{-8}$ | $2\times10^{-3}$ | $1\times10^{-9}$ | $5\times10^{-5}$ |
| | Te 127 | S | $2\times10^{-6}$ | $8\times10^{-3}$ | $6\times10^{-8}$ | $3\times10^{-4}$ |
| | | I | $9\times10^{-7}$ | $5\times10^{-3}$ | $3\times10^{-8}$ | $2\times10^{-4}$ |
| | Te 129 M | S | $8\times10^{-8}$ | $1\times10^{-3}$ | $3\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $3\times10^{-8}$ | $6\times10^{-4}$ | $1\times10^{-9}$ | $2\times10^{-5}$ |
| | Te 129 | S | $5\times10^{-6}$ | $2\times10^{-2}$ | $2\times10^{-7}$ | $8\times10^{-4}$ |
| | | I | $4\times10^{-6}$ | $2\times10^{-2}$ | $1\times10^{-7}$ | $8\times10^{-4}$ |
| | Te 131 M | S | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $6\times10^{-5}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-3}$ | $6\times10^{-9}$ | $4\times10^{-5}$ |
| | Te 132 | S | $2\times10^{-7}$ | $9\times10^{-4}$ | $7\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $1\times10^{-7}$ | $6\times10^{-4}$ | $4\times10^{-9}$ | $2\times10^{-5}$ |
| Terbium (65) | Tb 160 | S | $1\times10^{-7}$ | $1\times10^{-3}$ | $3\times10^{-9}$ | $4\times10^{-5}$ |
| | | I | $3\times10^{-8}$ | $1\times10^{-3}$ | $1\times10^{-9}$ | $4\times10^{-5}$ |
| Thallium (81) | Tl 200 | S | $3\times10^{-6}$ | $1\times10^{-2}$ | $9\times10^{-8}$ | $4\times10^{-4}$ |
| | | I | $1\times10^{-6}$ | $7\times10^{-3}$ | $4\times10^{-8}$ | $2\times10^{-4}$ |
| | Tl 201 | S | $2\times10^{-6}$ | $9\times10^{-3}$ | $7\times10^{-8}$ | $3\times10^{-4}$ |
| | | I | $9\times10^{-7}$ | $5\times10^{-3}$ | $3\times10^{-8}$ | $2\times10^{-4}$ |
| | Tl 202 | S | $8\times10^{-7}$ | $4\times10^{-3}$ | $3\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $2\times10^{-7}$ | $2\times10^{-3}$ | $8\times10^{-9}$ | $7\times10^{-5}$ |
| | Tl 204 | S | $6\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $3\times10^{-8}$ | $2\times10^{-3}$ | $9\times10^{-10}$ | $6\times10^{-5}$ |
| Thorium (90) | Th 227 | S | $3\times10^{-10}$ | $5\times10^{-4}$ | $1\times10^{-11}$ | $2\times10^{-5}$ |
| | | I | $2\times10^{-10}$ | $5\times10^{-4}$ | $6\times10^{-12}$ | $2\times10^{-5}$ |
| | Th 228 | S | $9\times10^{-12}$ | $2\times10^{-4}$ | $3\times10^{-13}$ | $7\times10^{-6}$ |
| | | I | $6\times10^{-12}$ | $4\times10^{-4}$ | $2\times10^{-13}$ | $1\times10^{-5}$ |
| | Th 230 | S | $2\times10^{-12}$ | $5\times10^{-5}$ | $8\times10^{-14}$ | $2\times10^{-6}$ |
| | | I | $1\times10^{-11}$ | $9\times10^{-4}$ | $3\times10^{-13}$ | $3\times10^{-5}$ |
| | Th 231 | S | $1\times10^{-6}$ | $7\times10^{-3}$ | $5\times10^{-8}$ | $2\times10^{-4}$ |
| | | I | $1\times10^{-6}$ | $7\times10^{-3}$ | $4\times10^{-8}$ | $2\times10^{-4}$ |
| | Th 232 | S | $3\times10^{-11}$ | $5\times10^{-5}$ | $1\times10^{-12}$ | $2\times10^{-6}$ |
| | | I | $3\times10^{-11}$ | $1\times10^{-3}$ | $1\times10^{-12}$ | $4\times10^{-5}$ |
| | Th Natural | S | $\frac{6\times10^{-11}}{[3\times10^{-11}]}$ | $\frac{6\times10^{-5}}{[3\times10^{-5}]}$ | $\frac{2\times10^{-12}}{[1\times10^{-12}]}$ | $\frac{2\times10^{-6}}{[1\times10^{-6}]}$ |
| | | I | $\frac{6\times10^{-11}}{[3\times10^{-11}]}$ | $\frac{6\times10^{-4}}{[3\times10^{-4}]}$ | $\frac{2\times10^{-12}}{[1\times10^{-12}]}$ | $\frac{2\times10^{-5}}{[1\times10^{-5}]}$ |
| | Th 234 | S | $6\times10^{-8}$ | $5\times10^{-4}$ | $2\times10^{-9}$ | $2\times10^{-5}$ |
| | | I | $3\times10^{-8}$ | $5\times10^{-4}$ | $1\times10^{-9}$ | $2\times10^{-5}$ |
| Thulium (69) | Tm 170 | S | $4\times10^{-8}$ | $1\times10^{-3}$ | $1\times10^{-9}$ | $5\times10^{-5}$ |
| | | I | $3\times10^{-8}$ | $1\times10^{-3}$ | $1\times10^{-9}$ | $5\times10^{-5}$ |
| | Tm 171 | S | $1\times10^{-7}$ | $1\times10^{-2}$ | $4\times10^{-9}$ | $5\times10^{-4}$ |
| | | I | $2\times10^{-7}$ | $1\times10^{-2}$ | $8\times10^{-9}$ | $5\times10^{-4}$ |
| Tin (50) | Sn 113 | S | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $9\times10^{-5}$ |
| | | I | $5\times10^{-8}$ | $2\times10^{-3}$ | $2\times10^{-9}$ | $8\times10^{-5}$ |
| | Sn 125 | S | $1\times10^{-7}$ | $5\times10^{-4}$ | $4\times10^{-9}$ | $2\times10^{-5}$ |
| | | I | $8\times10^{-8}$ | $5\times10^{-4}$ | $3\times10^{-9}$ | $2\times10^{-5}$ |
| Tungsten (74) [(Wolfram)] | W 181 | S | $2\times10^{-6}$ | $1\times10^{-2}$ | $8\times10^{-8}$ | $4\times10^{-4}$ |
| | | I | $1\times10^{-7}$ | $1\times10^{-2}$ | $4\times10^{-9}$ | $3\times10^{-4}$ |
| | W 185 | S | $8\times10^{-7}$ | $4\times10^{-3}$ | $3\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $1\times10^{-7}$ | $3\times10^{-3}$ | $4\times10^{-9}$ | $1\times10^{-4}$ |
| | W 187 | S | $4\times10^{-7}$ | $2\times10^{-3}$ | $2\times10^{-8}$ | $7\times10^{-5}$ |
| | | I | $3\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $6\times10^{-5}$ |

| Element (Atomic Number) | | Isotope | Table I Column 1 Air (uc/ml) | Table I Column 2 Water (uc/ml) | Table II Column 1 Air (uc/ml) | Table II Column 2 Water (uc/ml) |
|---|---|---|---|---|---|---|
| Uranium (92) | U 230 | S | $3\times10^{-10}$ | $1\times10^{-4}$ | $1\times10^{-11}$ | $5\times10^{-6}$ |
| | | I | $1\times10^{-10}$ | $1\times10^{-4}$ | $4\times10^{-12}$ | $5\times10^{-6}$ |
| | U 232 | S | $1\times10^{-10}$ | $8\times10^{-4}$ | $3\times10^{-12}$ | $3\times10^{-5}$ |
| | | I | $3\times10^{-11}$ | $8\times10^{-4}$ | $9\times10^{-13}$ | $3\times10^{-5}$ |
| | U 233 | S | $5\times10^{-10}$ | $9\times10^{-4}$ | $2\times10^{-11}$ | $3\times10^{-5}$ |
| | | I | $1\times10^{-10}$ | $9\times10^{-4}$ | $4\times10^{-12}$ | $3\times10^{-5}$ |
| | U 234 | S | $6\times10^{-10}$ | $9\times10^{-4}$ | $2\times10^{-11}$ | $3\times10^{-5}$ |
| | | I | $1\times10^{-10}$ | $9\times10^{-4}$ | $4\times10^{-12}$ | $3\times10^{-5}$ |
| | U 235 | S | $5\times10^{-10}$ | $8\times10^{-4}$ | $2\times10^{-11}$ | $3\times10^{-5}$ |
| | | I | $1\times10^{-10}$ | $8\times10^{-4}$ | $4\times10^{-12}$ | $3\times10^{-5}$ |
| | U 236 | S | $6\times10^{-10}$ | $1\times10^{-3}$ | $2\times10^{-11}$ | $3\times10^{-5}$ |
| | | I | $1\times10^{-10}$ | $1\times10^{-3}$ | $4\times10^{-12}$ | $3\times10^{-5}$ |
| | U 238 | S | $7\times10^{-11}$ | $1\times10^{-3}$ | $3\times10^{-12}$ | $4\times10^{-5}$ |
| | | I | $1\times10^{-10}$ | $1\times10^{-3}$ | $5\times10^{-12}$ | $4\times10^{-5}$ |
| | U 240 | S | $2\times10^{-7}$ | $1\times10^{-3}$ | $8\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $2\times8^{-7}$ | $1\times10^{-3}$ | $6\times10^{-9}$ | $3\times10^{-5}$ |
| | U Natural | S | $1\times10^{-10}$ [$7\times10^{-11}$] | $1\times10^{-3}$ [$5\times10^{-4}$] | $5\times10^{-12}$ [$3\times10^{-12}$] | $3\times10^{-5}$ [$2\times10^{-5}$] |
| | | I | $1\times10^{-10}$ [$6\times10^{-11}$] | $1\times10^{-3}$ [$5\times10^{-4}$] | $5\times10^{-12}$ [$2\times10^{-12}$] | $3\times10^{-5}$ [$2\times10^{-5}$] |
| Vanadium (23) | V 48 | S | $2\times10^{-7}$ | $9\times10^{-4}$ | $6\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $6\times10^{-8}$ | $8\times10^{-4}$ | $2\times10^{-9}$ | $3\times10^{-5}$ |
| Xenon (54) | Xe 131 M | Sub | $2\times10^{-5}$ | ------- | $4\times10^{-7}$ | ------- |
| | Xe 133 M | Sub | $1\times10^{-5}$ | ------- | $3\times10^{-7}$ | ------- |
| | Xe 133 | Sub | $1\times10^{-5}$ | ------- | $3\times10^{-7}$ | ------- |
| | Xe 135 | Sub | $4\times10^{-6}$ | ------- | $1\times10^{-7}$ | ------- |
| Ytterbium (70) | Yb 175 | S | $7\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| | | I | $6\times10^{-7}$ | $3\times10^{-3}$ | $2\times10^{-8}$ | $1\times10^{-4}$ |
| Yttrium (39) | Y 88 | S | $3\times10^{-7}$ | $2\times10^{-3}$ | $6\times10^{-9}$ | $7\times10^{-5}$ |
| | | I | $5\times10^{-8}$ | $3\times10^{-3}$ | $2\times10^{-9}$ | $9\times10^{-5}$ |
| | Y 90 | S | $1\times10^{-7}$ | $6\times10^{-4}$ | $4\times10^{-9}$ | $2\times10^{-5}$ |
| | | I | $1\times10^{-7}$ | $6\times10^{-4}$ | $3\times10^{-9}$ | $2\times10^{-5}$ |
| | Y 91 M | S | $2\times10^{-5}$ | $1\times10^{-1}$ | $8\times10^{-7}$ | $3\times10^{-3}$ |
| | | I | $2\times10^{-5}$ | $1\times10^{-1}$ | $6\times10^{-7}$ | $3\times10^{-3}$ |
| | Y 91 | S | $4\times10^{-8}$ | $8\times10^{-4}$ | $1\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $3\times10^{-8}$ | $8\times10^{-4}$ | $1\times10^{-9}$ | $3\times10^{-5}$ |
| | Y 92 | S | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $6\times10^{-5}$ |
| | | I | $3\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $6\times10^{-5}$ |
| | Y 93 | S | $2\times10^{-7}$ | $8\times10^{-4}$ | $6\times10^{-9}$ | $3\times10^{-5}$ |
| | | I | $1\times10^{-7}$ | $8\times10^{-4}$ | $5\times10^{-9}$ | $3\times10^{-5}$ |
| Zinc (30) | Zn 65 | S | $1\times10^{-7}$ | $3\times10^{-3}$ | $4\times10^{-9}$ | $1\times10^{-4}$ |
| | | I | $6\times10^{-8}$ | $5\times10^{-3}$ | $2\times10^{-9}$ | $2\times10^{-4}$ |
| | Zn 69 M | S | $4\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $7\times10^{-5}$ |
| | | I | $3\times10^{-7}$ | $2\times10^{-3}$ | $1\times10^{-8}$ | $6\times10^{-5}$ |
| | Zn 69 | S | $7\times10^{-6}$ | $5\times10^{-2}$ | $2\times10^{-7}$ | $2\times10^{-3}$ |
| | | I | $9\times10^{-6}$ | $5\times10^{-2}$ | $3\times10^{-7}$ | $2\times10^{-3}$ |
| Zirconium (40) | Zr 93 | S | $1\times10^{-7}$ | $2\times10^{-2}$ | $4\times10^{-9}$ | $8\times10^{-4}$ |
| | | I | $3\times10^{-7}$ | $2\times10^{-2}$ | $1\times10^{-8}$ | $8\times10^{-4}$ |
| | Zr 95 | S | $1\times10^{-7}$ | $2\times10^{-3}$ | $4\times10^{-9}$ | $6\times10^{-5}$ |
| | | I | $3\times10^{-8}$ | $2\times10^{-3}$ | $1\times10^{-9}$ | $6\times10^{-5}$ |
| | Zr 97 | S | $1\times10^{-7}$ | $5\times10^{-4}$ | $4\times10^{-9}$ | $2\times10^{-5}$ |
| | | I | $9\times10^{-8}$ | $5\times10^{-4}$ | $3\times10^{-9}$ | $2\times10^{-5}$ |
| Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than 2 hours. | | Sub | $1\times10^{-6}$ | ------- | $3\times10^{-8}$ | ------- |
| Any single radionuclide not listed above with decay mode other than Alpha emission or spontaneous fission and with radioactive half-life greater than 2 hours. | | | $3\times10^{-9}$ | $9\times10^{-5}$ | $1\times10^{-10}$ | $3\times10^{-6}$ |
| Any single radionuclide not listed above, which decays by alpha emission or spontaneous fission. | | | $6\times10^{-13}$ | $4\times10^{-7}$ | $2\times10^{-14}$ | $3\times10^{-8}$ |

Section 3. Footnotes to Table. In any case where there is a mixture in air or water of more than one (1) radionuclide, the limiting values for purposes of this regulation should be determined as follows:

(1) If the identity and concentration of each radionuclide in the mixture are known, the limiting values should be derived as follows: Determine, for each radionuclide in the mixture, the ration between the quantity present in the mixture and the limit otherwise established in this regulation for the specific radionuclide when not in a mixture. The sum of such ratios for all the radionuclides in the mixture may not exceed "1" (i.e., "unity").

EXAMPLE: If radionuclides a, b and c are present in concentrations Ca, Cb, and Cc, and if the applicable MPC's are MPCa, and MPCb, and MPCc respectively, then the concentrations shall be limited so that the following relationship exists:

$$\frac{Ca}{MPCa} + \frac{Cb}{MPCb} + \frac{Cc}{MPCc} \leq [=] 1$$

(2) If either the identity or the concentration of any radionuclide in the mixture is not known, the limiting values for purposes of this regulation shall be:

(a) For purposes of Table I, Col. 1 - $6 \times 10^{-13}$.

(b) For purposes of Table I, Col. 2 - $4 \times 10^{-7}$.

(c) For purposes of Table II, Col. 1 - $2 \times 10^{-14}$.

(d) For purposes of Table II, Col. 2 - $3 \times 10^{-8}$ [$^{-6}$].

(3) If any of the conditions specified below are met, the corresponding values specified in this subsection may be used in lieu of those specified in subsection (2) of this section.

(a) If the identity of each radionuclide in the mixture is known but the concentration of one (1) or more of the radionuclides in the mixture is not known, the concentration limit for the mixture is the limit specified in this regulation for the radionuclide in the mixture having the lowest concentration limit; or

(b) If the identity of each radionuclide in the mixture is not known, but it is known that certain radionuclides specified in this regulation are present in the mixture, the concentration limit for the mixture is the lowest concentration limit specified in this regulation for any radionuclide which is not known to be absent from the mixture; or as specified in the following chart:

(See chart on following page)

| Element (atomic number) and isotope | Table I Column 1 Air (uc/ml) | Table I Column 2 Water (uc/ml) | Table II Column 1 Air (uc/ml) | Table II Column 2 Water (uc/ml) |
|---|---|---|---|---|
| If it is known that (I 129, Table II only), Ra 226, and Ra 228 are not present | ---------- | $3 \times 10^{-6}$ | ---------- | $1 \times 10^{-7}$ |
| If it is known that alpha-emitters and Sr 90, I 129, Pb 210, Ac 227, Ra 228, Pa 230, Pu 241, and Bk 249 are not present | $3 \times 10^{-9}$ | ---------- | $1 \times 10^{-10}$ | ---------- |
| If it is known that alpha-emitters and Pb 210, Ac 227, Ra 228, and Pu 241 are not present | $3 \times 10^{-10}$ | ---------- | $1 \times 10^{-11}$ | ---------- |
| If it is known that alpha-emitters and Ac 227 are not present | $3 \times 10^{-11}$ | ---------- | $1 \times 10^{-12}$ | ---------- |
| If it is known that Ac 227, Th 230, Pa 231, Pu 238, Pu 239, Pu 240, Pu 242, Pu 244, Cm 248, Cf 249, and Cf 251 are not present | $3 \times 10^{-12}$ | ---------- | $1 \times 10^{-13}$ | ---------- |
| If it is known that Sr 90, I 125, I 126, I 129, I 131, (I 133, Table II only), Pb 210, Po 210, At 211, Ra 223, Ra 224, Ra 226, Ac 227, Ra 228, Th 230, Pa 231, Th 232, Th-nat, Cm 248, Cf 254, and Fm 256 are not present | ---------- | $9 \times 10^{-5}$ | ---------- | $3 \times 10^{-6}$ |
| If it is known that Sr 90, I 125, I 126, I 129, (I 131, I 133, Table II only), Pb 210, Po 210, Ra 223, Ra 226, Ra 228, Pa 231, Th-nat, Cm 248, Cf 254, and Fm 256 are not present | ---------- | $6 \times 10^{-5}$ | ---------- | $2 \times 10^{-6}$ |
| If it is known that Sr 90, I 129, (I 125, I 126, I 131, Table II only), Pb 210, Ra 226, Ra 228, Cm 248, and Cf 254 are not present | ---------- | $2 \times 10^{-5}$ | ---------- | 6 [2] $\times 10^{-7}$ |

(4) If the mixture of radionuclides consists of uranium and its daughter products in ore dust prior to chemical processing of the uranium ore, the values specified below may be used in lieu of those determined in accordance with subsection (1) of this section, or those specified in subsections (2) and (3) of this section.

(a) For purposes of Table I, Column I, 1 x $10^{-10}$ uc/ml gross alpha activity; or 5 [2.5] x $10^{-11}$ uc/ml natural uranium; or 75 micrograms per cubic meter of air natural uranium.

(b) For purposes of Table II, Column 1, 3 x $10^{-12}$ uc/ml gross alpha activity; or 2 [8] x $10^{-12}$ [$^{-13}$] uc/ml natural uranium; or 3 micrograms per cubic meter of air natural uranium.

(5) For purposes of this note, a radionuclide may be considered as not present in a mixture if:

(a) The ratio of the concentration of that radionuclide in the mixture ($C_a$) to the concentration limit for that radionuclide specified in Table II of this regulation ($MPC_a$) does not exceed 1/10, (i.e.,

$$\frac{C_a}{MPC_a} < \frac{1}{10}$$

(b) The sum of such ratios for all radionuclides considered as not present in the mixture does not exceed 1/4 (i.e.,

$$\frac{C_a}{MPC_a} + \frac{C_b}{MPC_b} + \quad < 1/4$$

C. HERNANDEZ, Commissioner
E. AUSTIN, JR., Secretary
APPROVED BY AGENCY: October 29, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

## CABINET FOR HUMAN RESOURCES
## Department for Health Services
## (Proposed Amendment)

**902 KAR 100:030. Posting and disposal requirements.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet [KRS 211.844 directs that the Secretary of the Cabinet] for Human Resources is empowered by KRS 211.844 to [shall] provide by regulation for the registration and licensing of the possession or use of any source of ionizing or electronic product [conveying] radiation and to regulate the [transportation,] handling and disposal of radioactive waste. The purpose of this regulation is to provide for quantity requirements for posting and disposal of radioactive material.

Section 1. Applicability. This regulation applies to persons licensed pursuant to the cabinet's radiation regulations.

Section 2. Table. The following table provides for the quantity requirements for posting and disposal of radioactive material as set forth in 902 KAR 100:020 and 902 KAR 100:021:

QUANTITY BASES FOR POSTING AND DISPOSAL REQUIREMENTS

| Material | Micro-curies | Material | Micro-curies |
|---|---|---|---|
| Americium-241 | 0.01 | Osmium-191 | 100 |
| Antimony-122 | 100 | Osmium-193 | 100 |
| Antimony-124 | 10 | Palladium-103 | 100 |
| Antimony-125 | 10 | Palladium-109 | 100 |
| Arsenic-73 | 100 | Phosphorus-32 | 10 |
| Arsenic-74 | 10 | Platinum-191 | 100 |
| Arsenic-76 | 10 | Platinum-193m | 100 |
| Arsenic-77 | 100 | Platinum-193 | 100 |
| Barium-131 | 10 | Platinum-197m | 100 |
| Barium-133 | 10 | Platinum 197 | 100 |
| Barium-140 | 10 | Plutonium-239 | 0.01 |
| Bismuth-210 | 1 | Polonium-210 | 0.1 |
| Bromine-82 | 10 | Potassium-42 | 10 |
| Cadmium-109 | 10 | Praseodymium-142 | 100 |
| Cadmium-115m | 10 | Praseodymium-143 | 100 |

| | | | | | |
|---|---|---|---|---|---|
| Cadmium-115 | 100 | Promethium-147 | 10 | Osmium-185 | 10 |
| Calcium-45 | 10 | Promethium-149 | 10 | Osmium-191m | 100 |
| Calcium-47 | 10 | Radium-226 | 0.01 | | |
| Carbon-14 | 100 | Rhenium-186 | 100 | | |
| Cerium-141 | 100 | Rhenium-188 | 100 | | |
| Cerium-143 | 100 | Rhodium-103m | 100 | | |
| Cerium-144 | 1 | Rhodium-105 | 100 | | |
| Cesium-131 | 1,000 | Rubidium-86 | 10 | | |
| Cesium-134m | 100 | Rubidium-87 | 10 | | |
| Cesium-134 | 1 | Ruthenium-97 | 100 | | |
| Cesium-135 | 10 | Ruthenium-103 | 10 | | |
| Cesium-136 | 10 | Ruthenium-105 | 10 | | |
| Cesium-137 | 10 | Ruthenium-106 | 1 | | |
| Chlorine-36 | 10 | Samarium-151 | 10 | | |
| Chlorine-38 | 10 | Samarium-153 | 100 | | |
| Chromium-51 | 1,000 | Scandium-46 | 10 | | |
| Cobalt-58m | 10 | Scandium-47 | 100 | | |
| Cobalt-58 | 10 | Scandium-48 | 10 | | |
| Cobalt-60 | 1 | Selenium-75 | 10 | | |
| Copper-64 | 100 | Silicon-31 | 100 | | |
| Dysprosium-165 | 10 | Silver-105 | 10 | | |
| Dysprosium-166 | 100 | Silver-110m | 1 | | |
| Erbium-169 | 100 | Silver-111 | 100 | | |
| Erbium-171 | 100 | Sodium-22 | 1 | | |
| Europium-152 (9.2h) | 100 | Sodium-24 | 10 | | |
| Europium-152 (13 yr.) | 1 | Strontium-85 | 10 | | |
| Europium-154 | 1 | Strontium-89 | 1 | | |
| Europium-155 | 10 | Strontium-90 | 0.1 | | |
| Fluorine-18 | 1,000 | Strontium-91 | 10 | | |
| Gadolinium-153 | 10 | Strontium-92 | 10 | | |
| Gadolinium-159 | 100 | Sulphur-35 | 100 | | |
| Gallium-72 | 10 | Tantalum-182 | 10 | | |
| Germanium-71 | 100 | Technetium-96 | 10 | | |
| Gold-198 | 100 | Technetium-97m | 100 | | |
| Gold-199 | 100 | Technetium-97 | 100 | | |
| Hafnium-181 | 10 | Technetium-99m | 100 | | |
| Holmium-166 | 100 | Technetium-99 | 10 | | |
| Hydrogen-3 | 1,000 | Tellurium-125m | 10 | | |
| Indium-113m | 100 | Tellurium-127m | 10 | | |
| Indium-114m | 10 | Tellurium-127 | 100 | | |
| Indium-115m | 100 | Tellurium-129m | 10 | | |
| Indium-115 | 10 | Tellurium-129 | 100 | | |
| Iodine-125 | 1 | Tellurium-131m | 10 | | |
| Iodine-126 | 1 | Tellurium-132 | 10 | | |
| Iodine-129 | 0.1 | Terbium-160 | 10 | | |
| Iodine-131 | 1 | Thallium-200 | 100 | | |
| Iodine-132 | 10 | Thallium-201 | 100 | | |
| Iodine-133 | 1 | Thallium-202 | 100 | | |
| Iodine-134 | 10 | Thallium-204 | 10 | | |
| Iodine-135 | 10 | Thorium natural | 100 | | |
| Iridium-192 | 10 | Thulium-170 | 10 | | |
| Iridium-194 | 100 | Thulium-171 | 10 | | |
| Iron-55 | 100 | Tin-113 | 10 | | |
| Iron-59 | 10 | Tin-125 | 10 | | |
| Krypton-85 | 100 | Tungsten-181 | 10 | | |
| Krypton-87 | 10 | Tungsten-185 | 10 | | |
| Lanthanum-140 | 10 | Tungsten-187 | 100 | | |
| Lutetium-177 | 100 | Uranium (natural) | 100 | | |
| Manganese-52 | 10 | Uranium-233 | 0.01 | | |
| Manganese-54 | 10 | Uranium-234 | 0.01 | | |
| Manganese-56 | 10 | Uranium-235 | 0.01 | | |
| Mercury-197m | 100 | Vanadium-48 | 10 | | |
| Mercury-197 | 100 | Xenon-131m | 1,000 | | |
| Mercury-203 | 10 | Xenon-133 | 100 | | |
| Molybdenum-99 | 100 | Xenon-135 | 100 | | |
| Neodymium-147 | 100 | Ytterbium-175 | 100 | | |
| Neodymium-149 | 100 | Ytterbium-90 | 10 | | |
| Nickel-59 | 100 | Yttrium-91 | 10 | | |
| Nickel-63 | 10 | Yttrium-92 | 100 | | |
| Nickel-65 | 100 | Yttrium-93 | 100 | | |
| Niobium-93m | 10 | Zinc-65 | 10 | | |
| Niobium-95 | 10 | Zinc-69m | 100 | | |
| Niobium-97 | 10 | Zinc-69 | 1,000 | | |
| | | Zirconium-93 | 10 | | |
| | | Zirconium-95 | 10 | | |
| | | Zirconium-97 | 10 | | |

Any alpha emitting radionuclide not listed above or mixture of alpha emitters of unknown composition 0.01

Any radionuclide other than alpha emitting radionuclides, not listed above or mixtures of beta emitters of unknown composition 0.1

[Section 3. Footnotes to Table. (1) Natural Thorium quantity limit based on alpha disintegration rate of Thorium 230, Thorium 232 and their daughter products.]

[(2) Natural uranium quantity limit based on alpha disintegration rate of Uranium 234, Uranium 235 and Uranium 238.]

[(3) For purposes of these regulations where there is involved a combination of isotopes in known amounts the limit for the combination should be derived as follows: Determine, for each isotope in the combination, the ratio between the quantity present in the combination and the limit otherwise established for the specific isotope when not in combination. The sum of such ratios for all the isotopes in the combination may not exceed "1" (i.e., "unity").]

[(4) Example: For purposes of these regulations if a particular batch contains 20,000 uCi of Au-198 and 50,000 uCi of C-14, it may also include not more than 300 uCi of I-131. This limit was determined as follows:

$$\frac{20{,}000\text{uCiAu-198}}{100{,}000\text{uCi}} + \frac{50{,}000\text{uCiC-14}}{100{,}000\text{uCi}} + \frac{300\text{uCiI-131}}{1{,}000\text{uCi}} = 1$$

[(5) The denominator in each of the above ratios was obtained by multiplying the figure in the table by 1,000.]

C HERNANDEZ, M.D., M.P.H.
E. AUSTIN, JR. Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing. R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

## REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs (note any effects upon competition): NA
(b) Reporting and paperwork requirements: None required
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing

costs: NA
(b) Reporting and paperwork requirements: None required
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with Unites States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: NA
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: NA
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 100:035. Receiving radioactive material and special form tests [Transport].**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. The purpose of this regulation is to provide procedures for picking up, and receiving and opening packages containing radioactive material and describe the tests for special form licensed material [a listing of the transport group in which radionuclides are classified for use in the transport of radioactive materials; tests for special form licensed material; and procedures for picking up, receiving and opening packages].

Section 1. Applicability. This regulation applies to all persons receiving licensed radioactive material and use of special form material [engaged in the packaging and transportation of radioactive material].

Section 2. Procedures for Picking Up, Receiving and Opening Packages. [; Table.] (1) Each licensee [or registrant] who expects to receive a package containing quantities of radioactive material in excess of the $A_2$ [Type A] quantities specified in 902 KAR 100:070, Section 21 [subsection (2) of this section] shall:
(a) If the package is to be delivered to the licensee's [or registrant's] facility by the carrier, make arrangements to receive the package when it is offered for delivery by the carrier; or
(b) If the package is to be picked up by the licensee [or registrant] at the carrier's terminal, make arrangements to receive notification from the carrier of the arrival of the package, at the time of arrival.
(c) Each licensee [or registration] who picks up a package of radioactive material from a carrier's terminal shall pick up the package expeditiously upon receipt of notification from the carrier of its arrival.
(2)(a) Each licensee [or registrant], upon receipt of a package of radioactive material, shall monitor the external surfaces of the package for radioactive contamination caused by leakage of the radioactive contents. The monitoring shall be performed as soon as practicable after receipt, but no later than three (3) hours after the package is received at the licensee's facility if received during the licensee's normal working hours or eighteen (18) hours if received after normal working hours. Such monitoring need not be performed on [, except]:
1. [(a)] Packages containing less than one (1) millicurie of beta and/or gamma emitting radioactive material or ten (10) microcuries of alpha emitting radioactive material [no more than the exempt quantity specified in the table in this subsection];
2. [(b)] Packages containing no more than ten (10) millicuries of radioactive material consisting solely of tritium, carbon-14, sulfur-35, or iodine-125;
3. [(c)] Packages containing only radioactive material as gases or in special form;
4. [(d)] Packages containing only radioactive material in other than liquid form (including Mo-99/Tc-99m generators) and less than the $A_2$ [not exceeding the Type A] quantity [limit] specified in 902 KAR 100:070, Section 21 [the table in this subsection]; and
5. [(e)] Packages containing only radionuclides with half-lives of less than thirty (30) days and a total quantity of no more then 100 millicuries. [The monitoring shall be performed as soon as practicable after receipt, but no later than three (3) hours after the package is received at the licensee's facility if received during the licensee's normal working hours, or eighteen (18) hours if received after normal working hours.]
(b) [(f)] If removable radioactive contamination in excess of 0.01 microcurie (22,000 disintegrations per minute) per 100 square centimeters of package surface is found on the external surfaces of the package, the licensee shall immediately notify, by telephone and telegraph, the final delivering carrier and [by telephone and telegraph,] the cabinet.
[(g) Table of Exempt and Type A Quantities.

| Transport Group | Exempt Quantity Limit (in millicuries) | Type A Quantity Limit (in curies) |
|---|---|---|
| I | .01 | 0.001 |
| II | 0.1 | 0.050 |
| III | 1 | 3 |
| IV | 1 | 20 |
| V | 1 | 20 |
| VI | 1 | 1,000 |
| VII | 25,000 | 1,000 |
| Special form | 1 | 20] |

(3)(a) Each licensee [or registrant], upon receipt of a package containing quantities of radioactive material in excess of the $A_2$ [Type A] quantities specified in 902 KAR 100:070, Section 21 [subsection (2) of this section], other than those transported by exclusive use

vehicle, shall monitor the radiation levels external to the package. The package shall be monitored as soon as practicable after receipt, but no later than three (3) hours after the package is received at the licensee's facility if received during the licensee's normal working hours, or eighteen (18) hours if received after normal working hours.

(b) [(4)] If radiation levels are found on the external surface of the package in excess of 200 millirems per hour, or at one (1) meter [three (3) feet] from the external surface of the package in excess of ten (10) millirems per hour, the licensee or registrant shall immediately notify, by telephone and telegraph, the final delivering carrier and the cabinet.

(4) [(5)] Each licensee or registrant shall establish and maintain procedures for safely opening packages in which radioactive material is received, and shall assure that such procedures are followed and that due consideration is given to special instructions for the type of package being opened.

[Section 3. Transport Grouping of Radionuclides. (1) The following list classifies radionuclides for the proper packaging and transporting of radioactive material in Kentucky:]

| [Element[1] | Radionuclide[2] | Group |
|---|---|---|
| Actinium (89) | Ac-227 | I |
| | Ac-228 | I |
| Americium (95) | Am-241 | I |
| | Am-243 | I |
| Antimony | Sb-122 | IV |
| | Sb-124 | III |
| | Sb-125 | III |
| Argon (18) | Ar-37 | VI |
| | Ar-41 | II |
| | Ar-41 | V |
| Arsenic (33) | As-73 | IV |
| | As-74 | IV |
| | As-76 | IV |
| | As-77 | IV |
| Astatine (85) | At-211 | III |
| Barium (56) | Ba-131 | IV |
| | Ba-133 | II |
| | Ba-140 | III |
| Berkelium (97) | Bk-249 | I |
| Beryllium (4) | Be-7 | IV |
| Bismuth (83) | Bi-206 | IV |
| | Bi-207 | III |
| | Bi-210 | II |
| | Bi-212 | III |
| Bromine (35) | Br-82 | IV |
| Cadmium (48) | Cd-109 | IV |
| | Cd-115m | III |
| | Cd-115 | IV |
| Calcium (20) | Ca-45 | IV |
| | Ca-47 | IV |
| Californium (98) | Cf-249 | I |
| | Cf-250 | I |
| | Cf-252 | I |
| Carbon (6) | C-14 | IV |
| Cerium (58) | Ce-141 | IV |
| | Ce-143 | IV |
| | Ce-144 | III |
| Cesium (55) | Cs-131 | IV |
| | Cs-134m | III |
| | Cs-134 | III |
| | Cs-135 | IV |
| | Cs-136 | IV |
| | Cs-137 | III |
| Chlorine (17) | Cl-36 | III |
| | Cl-38 | IV |
| Chromium (24) | Cr-51 | IV |
| Cobalt (27) | Co-56 | III |
| | Co-57 | IV |
| | Co-58m | IV |
| | Co-58 | IV |
| | Co-60 | III |
| Copper (29) | Cu-64 | IV |
| Curium (96) | Cm-242 | I |
| | Cm-243 | I |
| | Cm-244 | I |
| | Cm-245 | I |
| | Cm-246 | I |
| Dysprosium (66) | Dy-154 | III |
| | Dy-165 | IV |
| | Dy-166 | IV |
| Erbium (68) | Er-169 | IV |
| | Er-171 | IV |
| Europium (63) | Eu-150 | III |
| | Eu-152m | IV |
| | Eu-152 | III |
| | Eu-154 | II |
| | Eu-155 | IV |
| Fluorine (9) | F-18 | IV |
| Gadolinium (64) | Gd-153 | IV |
| | Gd-159 | IV |
| Gallium (31) | Ga-67 | III |
| | Ga-72 | IV |
| Germanium (32) | Ge-71 | IV |
| Gold (79) | Au-193 | III |
| | Au-194 | III |
| | Au-195 | III |
| | Au-196 | IV |
| | Au-198 | IV |
| | Au-199 | IV |
| Hafnium (72) | Hf-181 | IV |
| Holmium (67) | Ho-166 | IV |
| Hydrogen (1) | H-3 (see tritium) | |
| Indium (49) | In-113m | IV |
| | In-114m | III |
| | In-115m | IV |
| | In-115 | IV |
| Iodine (53) | I-124 | III |
| | I-125 | III |
| | I-126 | III |
| | I-129 | III |
| | I-131 | III |
| | I-132 | IV |
| | I-133 | III |
| | I-134 | IV |
| | I-135 | IV |
| Iridium (77) | Ir-190 | IV |
| | Ir-192 | III |
| | Ir-194 | IV |
| Iron (26) | Fe-55 | IV |
| | Fe-59 | IV |
| Krypton (36) | Kr-85m | III |
| | Kr-85m (uncompressed)[3] | V |
| | Kr-85 | III |
| | Kr-85 (uncompressed)[3] | VI |
| | Kr-87 | II |
| | Kr-87 (uncompressed)[3] | V |
| Lanthanum (57) | La-140 | IV |
| Lead (82) | Pb-203 | IV |
| | Pb-210 | II |
| | Pb-212 | II |
| Lutetium (71) | Lu-172 | III |
| | Lu-177 | IV |
| Magnesium (12) | Mg-28 | III |

| | | |
|---|---|---|
| Manganese (25) | Mn-52 | IV |
| | Mn-54 | IV |
| | Mn-56 | IV |
| Mercury (80) | Hg-197m | IV |
| | Hg-197 | IV |
| | Hg-203 | IV |
| Mixed fission products (MFP) | | II |
| Molybdenum (42) | Mo-99 | IV |
| Neodymium (60) | Nd-147 | IV |
| | Nd-149 | IV |
| Neptunium (93) | Np-237 | I |
| | Np-239 | I |
| Nickel (28) | Ni-56 | III |
| | Ni-59 | IV |
| | Ni-63 | IV |
| | Ni-65 | IV |
| Niobium (41) | Nb-93m | IV |
| | Nb-95 | IV |
| | Nb-97 | IV |
| Osmium (76) | Os-185 | IV |
| | Os-191m | IV |
| | Os-191 | IV |
| | Os-193 | IV |
| Palladium (46) | Pd-103 | V |
| | Pd-109 | IV |
| Phosphorus (15) | P-32 | IV |
| Platium (78) | Pt-191 | IV |
| | Pt-193 | IV |
| | Pt-193m | IV |
| | Pt-197m | IV |
| | Pt-197 | IV |
| Plutonium (94) | Pu-238(F) | I |
| | Pu-239(F) | I |
| | Pu-240 | I |
| | Pu-241(F) | I |
| | Pu-242 | I |
| Polonium (84) | Po-210 | I |
| Potassium (19) | K-42 | IV |
| | K-43 | III |
| Praseodymium (59) | Pr-142 | IV |
| | Pr-143 | IV |
| Promethium (61) | Pm-147 | IV |
| | Pm-149 | IV |
| Protactinium (91) | Pa-230 | I |
| | Pa-231 | I |
| | Pa-233 | II |
| Radium (88) | Ra-223 | II |
| | Ra-224 | II |
| | Ra-226 | I |
| | Ra-228 | I |
| Radon (86) | Rn-220 | IV |
| | Rn-222 | II |
| Rhenium (75) | Re-183 | IV |
| | Re-186 | IV |
| | Re-187 | IV |
| | Re-188 | IV |
| | Re-Natural | IV |
| Rhodium (45) | Rh-103m | IV |
| | Rh-105 | IV |
| Rubidium (37) | Rb-86 | IV |
| | Rb-87 | IV |
| | Rb-Natural | IV |
| Ruthenium (44) | Ru-97 | IV |
| | Ru-103 | IV |
| | Ru-105 | IV |
| | Ru-106 | III |
| Samarium (62) | Sm-145 | III |
| | Sm-147 | III |
| | Sm-151 | IV |
| | Sm-153 | IV |
| Scandium (21) | Sc-46 | III |
| | Sc-47 | IV |
| | Sc-48 | IV |
| Selenium (34) | Se-75 | IV |
| Silicon (14) | Si-31 | IV |
| Silver (47) | Ag-105 | IV |
| | Ag-110m | III |
| | Ag-111 | IV |
| Sodium (11) | Na-22 | III |
| | Na-24 | IV |
| Strontium (38) | Sr-85m | IV |
| | Sr-85 | IV |
| | Sr-89 | III |
| | Sr-90 | II |
| | Sr-91 | III |
| | Sr-92 | IV |
| Sulfur (16) | S-35 | IV |
| Tantalum (73) | Ta-182 | III |
| Technetium (43) | Tc-96m | IV |
| | Tc-96 | IV |
| | Tc-97m | IV |
| | Tc-97 | IV |
| | Tc-99m | IV |
| | Tc-99 | |
| Tellurium (52) | Te-125m | IV |
| | Te-127m | IV |
| | Te-127 | IV |
| | Te-129m | III |
| | Te-129 | IV |
| | Te-131m | III |
| | Te-132 | IV |
| Terbium (65) | Tb-160 | III |
| Thallium (81) | Tl-200 | IV |
| | Tl-201 | IV |
| | Tl-202 | IV |
| | Tl-204 | III |
| Thorium (90) | Th-227 | II |
| | Th-228 | I |
| | Th-230 | I |
| | Th-231 | I |
| | Th-232 | III |
| | Th-234 | II |
| | Th-Natural | III |
| Thulium (69) | Tm-168 | III |
| | Tm-170 | III |
| | Tm-171 | IV |
| Tin (50) | Sn-113 | IV |
| | Sn-117m | III |
| | Sn-121 | III |
| | Sn-125 | IV |
| Tritium (1) | H-3 | IV |
| | H-3 (as a gas, as luminous point, or absorbed on solid material) | VII |
| Tungsten (74) | W-181 | IV |
| | W-185 | IV |
| | W-187 | IV |
| Uranium (92) | U-230 | II |
| | U-232 | I |
| | U-233(F) | II |
| | U-234 | II |
| | U-235(F) | III |
| | U-236 | II |
| | U-238 | III |
| | U-Natural | III |
| | U-Enriched (F) | III |
| | U-Depleted | III |
| Vanadium (23) | V-48 | IV |
| | V-49 | III |
| Xenon (54) | Xe-125 | III |
| | Xe-131m | III |
| | Xe-131m (uncompressed)[3] | V |
| | Xe-133 | III |
| | Xe-133 (uncompressed)[3] | VI |

| | | |
|---|---|---|
| | Xe-135 | II |
| | Xe-135 (uncompressed)[3] | V |
| Ytterbium (70) | Yb-175 | IV |
| Yttrium (39) | Y-88 | III |
| | Y-90 | IV |
| | Y-91m | III |
| | Y-92 | IV |
| | Y-93 | IV |
| Zinc (30) | Zn-65 | IV |
| | Zn-69m | IV |
| | Zn-69 | IV |
| Zirconium (40) | Zr-93 | IV |
| | Zr-95 | III |
| | Zr-97 | IV |

[1] Atomic number shown in parentheses.
[2] Atomic mass number shown after the element symbol.
[3] Uncompressed means at a pressure not exceeding one atmosphere.
m - Metastable state.]

[(2) Any radionuclide not specifically listed in one (1) of the groups of this regulation shall be assigned to one (1) of the groups in accordance with the following table:

| | Radioactive half-life | | |
|---|---|---|---|
| Radio-nuclide | 0 to 1000 days | 1000 days to 10 E 6* yrs., | Over 10 E 6* years |
| Atomic no. 1-81 | Group III | Group II | Group III |
| Atomic No. 82 and over | Group I | Group I | Group III |

* "E" represents an exponent. For example, 10 E 6 means 10 times ten to the sixth power.]

[(3) For mixtures of radionuclides, the following shall apply:]

[(a) If the identity and respective activity of each radionuclide are known, the permissive activity of each radionuclide shall be such that the sum, for all groups present, of the ratio between the total activity for each group to the permissive activity for each group will not be greater than unity.]

[(b) If the groups of the radionuclides are known but the amount in each group cannot be reasonably determined, the mixture shall be assigned to the most restrictive group present.]

[(c) If the identity of all or some of the radionuclides cannot be reasonably determined, each of those unidentified radionuclides shall be considered as belonging to the most restrictive group which cannot be positively excluded.]

[(d) Mixtures consisting of a single radioactive decay chain where the radionuclides are in the naturally occurring proportions shall be considered as consisting of a single radionuclide. The group and activity shall be that of the first member present in the chain, except that if a radionuclide "X" has a half-life longer than that of that first member and an activity greater than that of any other member, including the first, at any time during transportation, the transport group of the nuclide "X" and the activity of the mixture shall be the maximum activity of that nuclide "X" during transportation.]

Section 3. [4.] Tests for Special Form Licensed Material. The following tests shall apply to [for packaging of] special form licensed material for transportation. (1) Free drop - A free drop through a distance of thirty (30) feet onto a flat, essentially unyielding, horizontal surface, striking the surface in such a position as to suffer maximum damage.

(2) Percussion - Impact of the flat circular end of a one (1) inch diameter steel rod weighing three (3) pounds, dropped through a distance of forty (40) inches. The capsule or material shall be placed on a sheet of lead, of hardness number 3.5 to 4.5 on the Vickers scale, and not more than one (1) inch thick, supported by a smooth essentially unyielding surface.

(3) Heating - Heating in air to a temperature of 1,475 degrees Fahrenheit and remaining at that temperature for a period of ten (10) minutes.

(4) Immersion - Immersion for twenty-four (24) hours in water at room temperature. The water shall be at pH 6-pH 8, with a maximum conductivity of ten (10) micromhos per centimeter.

C. HERNANDEZ. M.D., M.P.H.
E. AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested person notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing. R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs (note any effects upon competition): NA
(b) Reporting and paperwork requirements: None required
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs: NA
(b) Reporting and paperwork requirements: None required
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with Unites States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: NA

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: NA
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 100:040. General provisions for specific licenses.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the regulation and licensing of the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. [KRS 211.844 directs that the Secretary of the Cabinet for Human Resources shall provide by regulation for the licensing of the possession or use of any source of conveying radiation and the transportation, handling and disposal of radioactive waste.] The purpose of this regulation is to provide general provisions for the issuance of radioactive material licenses to possess, use, and transfer radioactive material.

Section 1. Applicability. The provisions of this regulation apply to the licensing of all persons who possess, use, or transfer radioactive material within Kentucky.

Section 2. License Requirement. Except for persons exempt as provided in 902 KAR 100:015 and 902 KAR 100:045, no person shall manufacture, produce, receive, possess, use, transfer, own, or acquire radioactive material except as authorized in a specific or general license issued pursuant to these regulations. Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product of any equipment, device, commodity, or other product containing source, by product, or special nuclear material, intended for use by the general public may be obtained only from the United States Nuclear Regulatory Commission, Washington, D. C. 20555 [20545].

Section 3. Types of Licenses. (1) Licenses for radioactive material are of two (2) types: general and specific.
(2) Except as otherwise specified in these regulations [902 KAR 100:050] general licenses are effective without the filing of an [specific] application with the cabinet or the issuance of licensing documents to particular persons. The general license is subject to all other applicable requirements of these regulations and any limitations of the general license.
(3) All specific licenses require the submission of an application to the cabinet and the issuance of a licensing document by the cabinet. Such licenses shall be subject to all applicable requirements of these regulations and to such limitations as may be specified in the licensing document.

Section 4. Filing of Application for Specific Licenses. (1) Applications for specific licenses shall be filed on a form prescribed by the cabinet.
(2) The cabinet may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the cabinet to determine whether the application should be granted or denied or whether a license should be modified or revoked. Pre-licensing visits may be made to the applicant's facility for the purpose of obtaining additional information furnished in the original application.
(3) Each application shall be signed by the applicant or licensee or a person duly authorized to act for and on his behalf.
(4) An application for a license may include a request for a license authorizing one (1) or more activities provided that the application specified such additional activities and complies with applicable regulations of the cabinet relating to such licenses.
(5) In his application, the applicant may incorporate by reference information contained in previous applications, statements, or reports filed with the cabinet, provided such references are clear and specific.
(6) Applications and documents submitted to the cabinet may be made available for public inspection except that the cabinet may withhold, upon request, any document or part thereof from public inspection if disclosure of its contents is not required in the public interest and would adversely affect the interest of a person concerned.

Section 5. General Requirements for the Issuance of Specific Licenses. A license application shall be approved if the cabinet determines that:
(1) The applicant is qualified by reason of training and experience to use the material in question for the purpose requested in accordance with these regulations in such a manner as to [protect health and] minimize danger to public health and safety or [life and] property; [and]
(2) The applicant's proposed equipment, facilities, and procedures are adequate to [protect health and] minimize danger to public health and safety or [life and] property; [and]
(3) The issuance of the license will not be inimical to the health and safety of the public; and
(4) The applicant satisfies any applicable special requirements in these regulations.
(5) In the case of an application for a license to receive and possess radioactive material which the cabinet determines will significantly affect the quality of the environment, the secretary of the cabinet or his designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made, has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such conclusion shall be grounds for denial of a

license to receive and possess radioactive material in such plant or facility. As used in this subsection the term "commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a site. The term does not mean site exploration, necessary roads for site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values.

Section 6. Issuance of Specific Licenses. (1) Upon a determination that an application meets the requirements of the Act and the regulations of the cabinet, the cabinet will [shall] issue a specific license authorizing the proposed activity in such form and containing such conditions and limitations as it deems appropriate or necessary.

(2) The cabinet may incorporate in any license at the time of issuance, or thereafter by appropriate rule, regulation, or order, or as otherwise specified by 902 KAR 100:170 and Section 14 of this regulation, such additional requirements and conditions with respect to the licensee's receipt, possession, use, and transfer of radioactive material subject to these regulations [this regulation] as it deems appropriate or necessary in order to:

(a) Minimize danger to public health and safety or property;

(b) Require such reports and the keeping of such records, and provide for such inspections of activities under the license as may be appropriate or necessary;

(c) Prevent loss or theft of licensed material.

Section 7. Specific Terms and Conditions of Licenses. (1) Each license issued pursuant to this regulation shall be subject to all the provisions of the Act, now or hereafter in effect, and to all rules, regulations, and orders of the cabinet.

(2) Neither the license nor any right under the license shall be assigned or otherwise transferred in violation of the provisions of the Act.

(3) Each person licensed by the cabinet pursuant to these regulations shall confine his use and possession of the material(s) licensed to the locations and purposes authorized in the license.

[(4) Each specific licensee authorized under these regulations to distribute certain devices to generally licensed persons:]

[(a) Shall report to the cabinet all transfers of such devices to persons generally licensed under these regulations. Such report shall identify each general licensee by name and address, the type of device transferred, and the quantity and type of radioactive material contained in the device. The report shall be submitted within thirty (30) days after the end of each calendar quarter in which such a device is transferred to generally licensed persons; and]

[(b) Shall furnish to each general licensee to whom he transfers such device a copy of the general license contained in these regulations.]

Section 8. Expiration and Termination of Licenses. (1) Except as provided in this section and in Section 9(2) of this regulation, each specific license shall expire at the end of the day, in the month and year stated therein.

(2) Each licensee shall notify the cabinet in writing and request termination of the license when the licensee decides to terminate all activities involving materials authorized under the license. The termination of activities shall be in accordance with 902 KAR 100:020, Section 21 and this section.

(3) If a licensee does not submit an application for license renewal under Section 9(2) of this regulation, the licensee, on or before the expiration specified in the license, shall:

(a) Terminate use of radioactive material;

(b) Remove radioactive contamination to the extent practicable;

(c) Properly dispose of radioactive material.

(4) Each license will be valid until the cabinet notifies the licensee in writing that the license is terminated.

Section 9. Renewal of License. (1) Applications for renewal of specific licenses shall be filed in accordance with these regulations.

(2) In any case in which a licensee, not less than thirty (30) days prior to expiration of his existing license, has filed an application in proper form for renewal or for a new license authorizing the same activities, such existing license shall not expire until the application has been finally determined by the cabinet[, or the time for seeking judicial review has elapsed].

Section 10. Amendment of Licenses at Request of Licensee. Applications for amendment of a license shall be filed in accordance with these regulations and shall specify the respects in which the licensee desires his license to be amended and the grounds for such amendment.

Section 11. Cabinet Action on Applications to Renew or Amend. In considering an application by a licensee to renew or amend his license, the cabinet shall apply the applicable criteria set forth in these regulations.

Section 12. Inalienability of Licenses. No license issued or granted under these regulations and no right to possess or utilize radioactive material granted by any license issued pursuant to these regulations shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person unless the cabinet shall, after securing full information, find that the transfer is in accordance with the provisions of these regulations and gives its consent in writing.

Section 13. Transfer of Material. (1) No licensee shall transfer radioactive material except as authorized pursuant to this regulation.

(2) Except as otherwise provided in the license and subject to the provisions of subsections (3) and (4) of this section, any licensee may transfer radioactive material subject to the acceptance of the transferee:

[(a) To the cabinet;]

[(b) To the United States Nuclear Regulatory Commission;]

(a) [(c)] To any person exempt from the requirements for a license as specified in this regulation to the extent permitted under such exemption;

(b) [(d)] To any person authorized to receive such material under terms of a general license or its equivalent, or a specific license or equivalent licensing document, issued by the cabinet, the United States Nuclear Regulatory Commission, or any agreement state, or to any person otherwise authorized to receive such material by the federal government or any agency thereof, the cabinet, or any agreement state; or

(c) [(e)] As otherwise authorized by the cabinet in writing.

(3) Before transferring radioactive material to a specific licensee of the cabinet, United States Nuclear Regulatory Commission or an agreement state or to a general licensee who is required to register with the cabinet, United States Nuclear Regulatory Commission or with an agreement state prior to receipt of the radioactive material, the licensee transferring the material shall verify that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred.

(4) The following methods for the verification required by this regulation are acceptable:

(a) The transferor may have in his possession, and read, a current copy of the transferee's specific license or registration certificate;

(b) The transferor may have in his possession a written certificate by the transferee that he is authorized by license or registration certificate to receive the type, form, and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency and expiration date;

(c) For emergency shipments, the transferor may accept oral certification by the transferee that the transferee [he] is authorized by license or registration certificate to receive the type, form, and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency, and expiration date; provided, that the oral certification is confirmed in writing within ten (10) days;

(d) The transferor may obtain other sources of information compiled by a reporting service from official records of the cabinet, the United States Nuclear Regulatory Commission, or the licensing agency of an agreement state as to the identity of licensees and the scope and expiration dates of licenses and registration; or

(e) When none of the methods of verification described in paragraphs (a) through [to] (d) of this subsection are readily available or when a transferor desires to verify that information received by one (1) of such methods is correct or up-to-date, the transferor may obtain and record confirmation from the cabinet, United States Nuclear Regulatory Commission, or the licensing agency of an agreement state that the transferee is licensed to receive the radioactive material.

(5) Shipment [Preparation for shipments] and transport of radioactive material shall be in accordance with the provisions of these regulations.

Section 14. Modification, Revocation, and Suspension [Termination] of Licenses. (1) The terms and conditions of any [all] license shall be subject to amendment, revisions, or modifications or the license may be suspended or revoked by reason of amendments to or violation of the Act, or by reason, including violation(s), of rules, regulations, and orders issued by the cabinet.

(2) Any license may be revoked, suspended, or modified, in whole or in part, for any material false statement in the application or any statement of fact required under provisions of the Act, or because of conditions revealed by such application or statement of fact or any report, record, or inspection, or other means which would warrant the cabinet to refuse to grant a license on an original application, or for violation of, or failure to observe any of, the terms and conditions of the Act, or the license, or of any rules, regulations, or order of the cabinet.

(3) Except in cases of willful violation or those in which the public health, interest, or safety requires otherwise, no license shall be modified, suspended, or revoked unless, prior to the institution of proceedings therefor, facts or conduct which may warrant such action shall have been called to the attention of the licensee in writing and the licensee shall have been accorded an opportunity to demonstrate or achieve compliance with all lawful requirements.

[(4) The cabinet may terminate a specific license upon request submitted by the licensee to the cabinet in writing.]

Section 15. Retention of Records. (1) Each person who receives radioactive material pursuant to a license issued pursuant to these regulations shall keep records showing the receipt, transfer, and disposal of such radioactive material.

(2)(a) ["]Records of receipt["] of radioactive material which must be maintained pursuant to subsection (1) of this section shall be maintained as long as the licensee retains possession of the radioactive material and for two (2) years following transfer or disposal of the radioactive material.

(b) ["]Records of transfer["] of radioactive material shall be maintained by the licensee who transferred the material for five (5) years after such transfer.

(c) ["]Records of disposal["] of radioactive material shall be maintained in accordance with 902 KAR 100:021 [100:020].

(3) All other records required by these regulations or by a license condition shall be maintained for the period specified by the applicable regulation or license condition. In the event the retention period is not specified by regulation or license condition, such records shall be permanently maintained unless the cabinet authorizes their disposition upon proper application for their destruction.

(4) Records required to be maintained pursuant to these regulations may be the original, a reproduced copy or a microform if duly authenticated by authorized personnel and capable of producing a clear and legible copy after storage for the period specified by cabinet regulations.

C. HERNANDEZ, M.D., M.P.H.
E. AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested person notify the following office i n writing by December 18, 1985 of their desire to appear and testify at the hearing. R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs (note any effects upon competition): NA
(b) Reporting and paperwork requirements: None required
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs: NA
(b) Reporting and paperwork requirements: None required
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: NA
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: NA
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes

**CABINET OR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 100:045. Exemptions.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and [to regulate] the handling and disposal of radioactive waste. The purpose of this regulation is to provide exemptions for certain uses of radioactive material and specific devices containing radioactive material.

Section 1. Applicability. This regulation exempts certain uses of radioactive material and devices containing radioactive material from the provisions of these regulations.

Section 2. Exemption of Source Material. (1) Any person is exempt from these regulations [this regulation] to the extent that such person receives, possesses, uses, or transfers source material in any chemical mixture, compound, solution, or alloy in which the source material is by weight less than 0.05 percent of the mixture, compound, solution, or alloy.
(2) Any person is exempt from these regulations [this regulation] to the extent that such person receives, possesses, uses, or transfers unrefined and unprocessed ore containing source material; provided that, except as authorized in a specific license, such person shall not refine or possess such ore. [This exemption does not apply to the mining of ore containing source material.]
(3) Any person is exempt from these regulations [this regulation] to the extent that such person receives, possesses, uses, or transfers:
(a) Any quantities of thorium contained in:
1. Incandescent gas mantles;
2. Vacuum tubes;
3. Welding rods;
4. Electric lamps for illuminating purposes provided that each lamp does not contain more than fifty (50) milligrams of thorium;
5. Germicidal lamps, sunlamps, and lamps for outdoor or industrial lighting provided that each lamp does not contain more than two (2) grams of thorium; or
6. Rare earth metals and compounds, mixtures, and products containing not more than 0.25 percent by weight thorium, uranium, or any combination of these.
7. Personal neutron dosimeters, provided that each dosimeter does not contain more than fifty (50) milligrams of thorium.
(b) Source material contained in the following products:
1. Glazed ceramic tableware, provided that the glaze contains not more than twenty (20) percent by weight source material;
2. Glassware, glass enamel and glass enamel frit containing not more than ten (10) percent by weight source material; but not including commercially manufactured glass brick, pane glass, ceramic tile, or other glass, glass enamel, or ceramic used in construction.
(c) Piezoelectric ceramic containing not more than two (2) percent by weight source material.
(d) Photographic film, negatives, and prints containing uranium or thorium.
(e) Any finished product or part fabricated of, or containing, tungsten-thorium [tungsten] or magnesium-thorium alloys, provided that the thorium content of the alloy does not exceed four (4) percent by weight and that the exemption contained in this paragraph shall not be deemed to authorize the chemical, physical, or metallurgical treatment or processing of any such product or part.
(f) Uranium contained in counterweights installed in aircraft, rockets, projectiles, and missiles, or stored or handled in connection with installation or removal of such counterweights; provided that:
1. The counterweights are manufactured in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission [cabinet, the

United States Atomic Energy Commission, or any agreement state] authorizing distribution by the licensee pursuant to 10 CFR Part 40 [this subparagraph or equivalent regulations of the AEC or any agreement state];

2. Each counterweight has been impressed with following legend clearly legible through any plating or other covering: "DEPLETED URANIUM";

3. Each counterweight is durably and legibly labeled or marked with identification of the manufacturer, and the statement: "UNAUTHORIZED ALTERATIONS PROHIBITED"; and

4. The exemption contained in this subsection shall not be deemed to authorize the chemical, physical, or metallurgical treatment or processing of such counterweights other than repair or restoration of any plating or other covering.

(g) Uranium used as shielding constituting part of any shipping container which is conspicuously and legibly impressed with the legend "CAUTION - RADIOACTIVE SHIELDING - URANIUM" and which meets the specifications for containers for radioactive material prescribed by Section 173.394 or 173.395 of 49 CFR Part 173 of U.S. Department of Transportation regulations [178.250, Specification 55, Part 178, of the regulations published by the United States Department of Transportation (49 C.F.R. 178.250)].

(h) Thorium contained in finished optical lenses, provided that each lens does not contain more than thirty (30) percent by weight of thorium. The exemption contained in this subsection shall not be deemed to authorize either:

1. The shaping, grinding, or polishing of such lens or manufacturing processes other than the assembly of such lens into optical systems and devices without any alteration of the lens; or

2. The receipt, possession, use, or transfer of thorium contained in contact lenses, or in spectacles, or in eye-pieces in binoculars or other optical instruments.

(i) Uranium contained in detector heads for use in fire detection units, provided that each detector head contains not more than 0.005 microcurie of uranium.

(j) Thorium contained in any finished aircraft engine part containing nickel-thoria alloy, provided that:

1. The thorium is dispersed in the nickel-thoria alloy in the form of finely divided thoria (thorium dioxide); and

2. The thorium content in the nickel-thoria alloy does not exceed four (4) percent by weight.

(4) The exemptions in this section of this regulation do not authorize the manufacture[, processing or production] of any of the products described herein.

Section 3. Exemption of Radioactive Material Other than Source Material. (1) Exempt concentrations.

(a) Except as provided in paragraph (b) of this subsection, any person is exempt from these regulations to the extent that such person receives, possesses, uses, transfers, owns, or acquires products or materials containing radioactive material in concentrations not in excess of those listed in 902 KAR 100:085 [these regulations].

(b) No person may introduce radioactive material into a product or material knowing or having reason to believe that it will be transferred to persons exempt under paragraph (a) of this subsection or equivalent regulations of the U.S. Nuclear Regulatory [United States Atomic Energy] Commission or any agreement state, except in accordance with a license issued pursuant to these regulations.

(2) Certain items containing radioactive material. Except for persons who apply radioactive material to, or persons who incorporate radioactive material into the following products, any person is exempt from these regulations to the extent that he receives, possesses, uses, transfers, owns, or acquires the following products:

(a) Timepieces or hand or dials containing not more than the following specified quantities of radioactive material and not exceeding the following specified levels of radiation:

1. Twenty-five (25) millicuries of tritium per timepiece;

2. Five (5) millicuries of tritium per hand; or

3. Fifteen (15) millicuries of tritium per dial (bezels when used shall be considered as part of the dial).

4. 100 microcuries of promethium-147 per watch or 200 microcuries of promethium-147 per any other timepiece;

5. Twenty (20) microcuries of promethium-147 per watch hand or forty (40) microcuries of promethium-147 per other timepiece hand; or

6. Sixty (60) microcuries of promethium-147 per watch dial or 120 microcuries of promethium-147 per other timepiece dial (bezels when used shall be considered as part of the dial).

7. The radiation dose rate [levels of radiation] from hands and dials containing promethium-147 will not exceed, when measured through fifty (50) milligrams per square centimeter of absorber:

a. For wrist watches, 0.1 millirad per hour at ten (10) centimeters from any surface;

b. For pocket watches, 0.1 millirad per hour at one (1) centimeter from any surface;

c. For any other timepiece, 0.2 millirad per hour at ten (10) centimeters from any surface.

8. One (1) microcurie of radium-226 per timepiece in timepieces acquired prior to effective date of this regulation.

(b) Lock illuminators containing not more than fifteen (15) millicuries of tritium or not more than two (2) millicuries of promethium-147 installed in automobile locks. The radiation dose rate [levels of radiation] from each lock illuminator containing promethium-147 will not exceed one (1) millirad per hour at one (1) centimeter from any surface when measured through fifty (50) milligrams per square centimeter of absorber.

(c) Precision balances [Balances of precision] containing not more than one (1) millicurie of tritium per balance or not more than 0.5 millicurie of tritium per balance part.

(d) Automobile shift quadrants containing not more than twenty-five (25) millicuries of tritium.

(e) Marine compasses containing not more than 750 millicuries of tritium gas and other marine navigational instruments containing not more than 250 millicuries of tritium gas.

(f) Thermostat dials and pointers containing not more than twenty-five (25) millicuries of tritium per thermostat.

(g) Electron tubes; provided, that each tube does not contain more than one (1) of the

following specified quantities of radioactive material:

1. 150 millicuries of tritium per microwave receiver protector tube or ten (10) millicuries of tritium per any other electron tube.
2. One (1) microcurie of cobalt-60.
3. Five (5) microcuries of nickel-63.
4. Thirty (30) microcuries of krypton-85.
5. Five (5) microcuries of cesium-137.
6. Thirty (30) microcuries of promethium-147;

and provided further, that the radiation dose rate [level of radiation] due to radioactive material contained in each electron tube does not exceed one (1) millirad per hour at one (1) centimeter from any surface when measured through seven (7) milligrams per square centimeter of absorber. For purposes of this subparagraph, "electron tubes" include spark gap tubes, power tubes, gas tubes including glow lamps, receiving tubes, microwave tubes, indicator tubes, pick-up tubes, radiation detection tubes, and any other completely sealed tube that is designed to conduct or control electrical currents.

(h) Ionizing radiation measuring instruments containing, for purposes of internal calibration or standardization, one (1) or more sources [a source] of radioactive material not exceeding the applicable quantity set forth in these regulations provided that:

1. Each source contains no more than one (1) exempt quantity set forth in 902 KAR 100:080; and
2. Each instrument contains no more than ten (10) exempt quantities. For purposes of this requirement, an instrument's source(s) may contain either one (1) or different types of radionuclides and an individual exempt quantity may be composed of fractional parts of one (1) or more of the exempt quantitites in 902 KAR 100:080, provided that the sum of such fractions shall not exceed unity.

(i) Spark cap irradiators containing not more than one (1) microcurie of cobalt-60 per spark gap irradiator for use in electrically ignited fuel oil burners having a firing rate of at least three (3) gallons per hour.

(3) Resins containing scandium 46 and designed for sand consolidation in oil wells. Any person is exempt from these regulations to the extent that such person receives, possesses, uses, transfers, owns, or acquires synthetic plastic resins containing scandium-46 which are designed for sand consolidation in oil wells. Such resins shall have been manufactured or imported in accordance with a specific license issued by the U.S. Nuclear Regulatory [United States Atomic Energy] Commission, or shall have been manufactured in accordance with the specifications contained in a specific license [or equivalent licensing document] issued by the cabinet or any agreement state to the manufacturer of such resins pursuant to licensing requirements equivalent to those in Section 32.16 and 32.17 of 10 CFR Part 32 of the regulations of the U.S. Nuclear Regulatory [Atomic Energy] Commission. This exemption does not authorize the manufacture of any resins containing scandium-46.

(4) Gas and aerosol detectors containing radioactive material. Except for persons who manufacture, process, or produce gas and aerosol detectors containing radioactive material, any person is exempt from these regulations to the extent that such person receives, possesses, uses, transfers, owns, or acquires radioactive material in gas and aerosol detectors designed to protect life or property from fires and airborne hazards provided:

(a) Detectors containing byproduct material shall have been manufactured, imported, or transferred in accordance with a specific license issued by the U.S. Nuclear Regulatory [United States Atomic Energy] Commission pursuant to Section 32.26 of 10 CFR, Part 32, which license authorizes the transfer of the detectors to persons who are exempt from regulatory requirements; or

(b) Detectors containing other than byproduct, source, or special nuclear material shall have been manufactured or transferred in accordance with a specific license issued by the cabinet or any agreement state pursuant to licensing requirements equivalent to those set forth in 902 KAR 100:058 [Section 32.36 of 10 CFR, Part 32], which license authorizes the transfer of the detectors to persons who are exempt from regulatory requirements.

(5) Self-luminous products containing radioactive material.

(a) Tritium, krypton-85, or promethium-147. Except for persons who manufacture, process, or produce self-luminous products containing tritium, krypton-85, or promethium-147, any person is exempt from these regulations to the extent that such person receives, possesses, uses, transfers, owns, or acquires tritium, krypton-85, or promethium-147 in self-luminous products manufactured, processed, produced, imported, or transferred in accordance with a specific license issued by the U.S. Nuclear Regulatory [United States Atomic Energy] Commission pursuant to Section 32.22 of 10 CFR, Part 32, which license authorizes the transfer of the product to persons who are exempt from regulatory requirements. The exemption in this subsection does not apply to tritium, krypton-85, or promethium-147, used in products for frivolous purposes or in toys or adornments.

(b) Radium-226. Any person is exempt from these regulations to the extent that such person receives, possesses, uses, transfers, or owns articles containing less than one-tenth (0.1) microcurie of radium-226 which were acquired prior to the effective date of this regulation.

(6) Exempt quantities.

(a) Except as provided in paragraphs (c) and (d) of this subsection, any person is exempt from these regulations to the extent that such person receives, possesses, uses, transfers, owns, or acquires radioactive material in individual quantities each of which does not exceed the applicable quantity set forth in 902 KAR 100:080 [these regulations].

(b) Any person who possesses radioactive material received or acquired under the general license formerly provided in RH-8, Section 3(a)(2) of the Kentucky State Board of Health "RH" Regulations, effective October, 1968, is [are] exempt from the requirements for a license set forth in these regulations [this regulation] to the extent that such person possesses, uses, transfers or owns such radioactive material. Such exemption does not apply for radium-226.

(c) Paragraphs (a) and (b) of this subsection do not authorize the production, packaging or repackaging of radioactive material for purposes of commercial distribution, or the incorporation of radioactive material into products intended for commercial distribution.

(d) No person may, for purposes of commercial

distribution, transfer radioactive material in the individual quantities set forth in 902 KAR 100:080 [these regulations] knowing or having reason to believe that such quantities of radioactive material will be transferred to persons exempt under this subsection or equivalent regulations of the U.S. Nuclear Regulatory [United States Atomic Energy] Commission or any agreement state, except in accordance with a specific license issued by the U.S. Nuclear Regulatory [United States Atomic Energy] Commission pursuant to Section 32.18 of 10 CFR, Part 32, or by the cabinet, which license states that the radioactive [byproduct] material may be transferred by the licensee to persons exempt under this paragraph or the equivalent regulations of the U.S. Nuclear Regulatory [United States Atomic Energy] Commission or any agreement state.

C HERNANDEZ, M.D., M.P.H.
E. AUSTIN, JR. Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing. R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs (note any effects upon competition): NA
(b) Reporting and paperwork requirements: None required
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs: NA
(b) Reporting and paperwork requirements: None required
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: NA
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: NA
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 100:050. General licenses.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and to regulate the handling and disposal of radioactive waste. The purpose of this regulation is to provide for the general licensing of certain uses of radioactive material and specific devices containing radioactive material.

Section 1. Applicability. The provisions of this regulation apply to persons who manufacture or use radioactive material under a general license as provided under this regulation.

Section 2. General Licenses; Source Material. (1) A general license is hereby issued authorizing commercial and industrial firms, research, educational and medical institutions, and state and local government agencies to [the possession,] use and transfer [of] not more than fifteen (15) pounds of source material at any time for research, development, educational, commercial, or operational purposes. [by persons in the categories listed below provided that no such] A person authorized to use or transfer source material [shall,] pursuant to this general license may not receive more than a total of 150 pounds of source material in any one (1) calendar year:
[(a) Pharmacists using the source material solely for the compounding of medicinals;]
[(b) Physicians using the source material for medicinal purposes;]
[(c) Persons receiving possession of source material from pharmacists and physicians in the form of medicinals or drugs; and]
[(d) Commercial and industrial firms, and research, education, and medical institutions for research, development, educational, or commercial purposes.]
(2) Persons who receive, possess, use or transfer source material pursuant to the general license issued in subsection (1) of this section are exempt from the provisions of these regulations to the extent that such receipt, possession, use, or transfer is within the terms of such general license; provided, however, that this exemption shall not be deemed to apply to any person who is also in possession of source material under a specific license issued pursuant to these regulations [this regulation].
(3) A general license is hereby issued authorizing the receipt of title of source material without regard to quantity. The general license under this subsection does not authorize any person to receive, possess, use, or transfer source material.
(4) Depleted uranium in industrial products and devices.
(a) A general license is hereby issued to

receive, acquire, possess, use, or transfer, in accordance with the provisions of this subsection, depleted uranium contained in industrial products or devices for the purpose of providing a concentrated mass in a small volume of the product or device.

(b) The general license applies only to industrial products or devices which have been manufactured either in accordance with a specific license issued to the manufacturer of the products or devices pursuant to 902 KAR 100:058 or in accordance with a specific license issued to the manufacturer by the U.S. Nuclear Regulatory Commission or an agreement state which authorizes manufacture of the products or devices for distribution to persons generally licensed by the U.S. Nuclear Regulatory Commission or an agreement state.

(c)1. Persons who receive, acquire, possess, or use depleted uranium pursuant to this general license shall notify the cabinet. The notification shall be submitted within thirty (30) days after the first receipt or acquisition of such depleted uranium. The general licensee shall furnish the following information and such other information as may be required:

a. Name and address of the general licensee;

b. A statement that the general licensee has developed and will maintain procedures designed to establish physical control over the depleted uranium and designed to prevent transfer to such depleted uranium in any form, including metal scrap, to persons not authorized to receive the depleted uranium; and

c. Name and/or title, address, and telephone number of the individual duly authorized to act for and on behalf of the general licensee in supervising the procedures.

2. The general licensee possessing or using depleted uranium under this general license shall report in writing to the cabinet any changes in information furnished by the notification. The report shall be submitted within thirty (30) days after the effective date of such change.

(d) A person who receives, acquires, possesses, or uses depleted uranium pursuant to the general license established by paragraph (a) of this subsection:

1. Shall not introduce such depleted uranium, in any form, into a chemical, physical, or metallurgical treatment or process except a treatment or process for repair or restoration of any plating or other covering of the depleted uranium;

2. Shall not abandon such depleted uranium;

3. Shall transfer or dispose of such depleted uranium only by transfer in accordance with the provisions of 902 KAR 100:040. In the case where the transferee receives the depleted uranium pursuant to the general license established by this subsection, the transferor shall furnish the transferee a copy of this regulation. In the case where the transferee receives the depleted uranium pursuant to a general license contained in the U.S. Nuclear Regulatory Commission's or agreement state's regulation equivalent, the transferor shall furnish the transferee a copy of this regulation accompanied by an note explaining that use of the product or device is regulated by the U.S. Nuclear Regulatory Commission or agreement state under requirements substantially the same as those in this regulation;

4. Within thirty (30) days of any transfer, shall report in writing to the cabinet the name and address of the person receiving the depleted uranium pursuant to such transfer; and

5. Shall not export such depleted uranium except in accordance with a license issued by the U.S. Nuclear Regulatory Commission pursuant to 10 CFR Part 110.

(e) Any person receiving, acquiring, possessing, using, or transferring depleted uranium pursuant to the general license established by this subsection is exempt from the requirements of 902 KAR 100:020 and 902 KAR 100:165 of these regulations with respect to the depleted uranium covered by that general license.

Section 3. General Licenses; Radioactive Material Other than Source Material. (1) A general license is hereby issued to transfer, receive, acquire, own, possess, and use radioactive material incorporated in the following [a] devices or equipment which have [is listed in Section 6 of this regulation and has] been manufactured, tested and labeled by the manufacturer in accordance with a specific license issued to the manufacturer [or equivalent licensing document, issued] by the [cabinet, the] United States Nuclear Regulatory Commission for use pursuant to 10 CFR Part 31.3 [Atomic Energy Commission, or any agreement state, and authorizing distribution under the general license of this subsection or its equivalent];

(a) Static elimination device. Devices designed for use as static eliminators which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries of polonium-210 per device; and

(b) Ion generating tube. Devices designed for ionization of air which contain, as a sealed source or sources, radioactive material consisting of total of not more than 500 microcuries of polonium-210 per device or a total of not more than fifty (50) millicuries of hydrogen-3 (tritium) per device.

(2) The general license provided in subsection (1) of this section is subject to all applicable provisions of these regulations including provisions relating to the labeling of containers.

(3) Certain measuring, gauging or controlling devices.

(a) A general license is hereby issued to commercial, and industrial firms and to research, educational and medical institutions, individuals in the conduct of their business, and state or local government agencies to own, receive, acquire, possess, use or transfer in accordance with the provisions of this subsection, radioactive material, excluding special nuclear material, contained in devices designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition, or for producing light or an ionized atmosphere. [own, receive, acquire, possess, and use radioactive material when contained in devices designed and manufactured for the purpose of detecting, measuring, gauging, or controlling thickness, density, level, interface location, radiation leakage, or qualitative or quantitative chemical composition, or for producing light or an ionized atmosphere, when such devices are

manufactured in accordance with the specifications contained in a specific license or equivalent licensing document issued to the supplier pursuant to these regulations, or its equivalent, by the cabinet, the United States Atomic Energy Commission, or any agreement state, the authorizing distribution under the general license of this paragraph or its equivalent; provided, that:]

[1. Such devices are labeled in accordance with the provisions of the specific license or equivalent licensing document which authorizes the distribution of the devices. (Regulations under the Federal Food, Drug, and Cosmetic Act authorizing the use of radioactive control devices in food production require certain additional labeling thereon which is found in Section 121.3001 of the Code of Federal Regulations, Title 21.);]

[2. Such devices bear a label containing the following or a substantially similar statement which contains the information called for in the following statement:

"The receipt, possession, use and transfer of this device, Model _____, Serial No. _____, are subject to a general license or equivalent authorization, and the regulations of the United States Atomic Energy Commission or of a state with which the Atomic Energy Commission has entered into an Agreement for the exercise of regulatory authority. Removal of this label is prohibited.

CAUTION - RADIOACTIVE MATERIAL

*_____

(Name of Supplier)"

*The model, serial number and name of supplier may be omitted from this label provided they are elsewhere specified in labeling affixed to the device.]

[3. Such devices are installed on the premises of the general licensee by a person authorized to install such devices under a specific license or equivalent licensing document issued to the installer by the cabinet, the United States Atomic Energy Commission, or any agreement state, if a label affixed to the device at the time of receipt states that installation by a specific licensee is required. The requirement of this subparagraph does not apply while devices are held in storage in the original shipping container pending installation by a specific licensee.]

(b) The general license in this subsection applies only to radioactive material contained in devices which have been manufactured and labeled in accordance with the specifications contained in a specific license issued by the cabinet pursuant to 902 KAR 100:058 or in accordance with the specifications contained in a specific license issued by the U.S. Nuclear Regulatory Commission or an agreement state which authorizes distribution of devices to persons generally licensed by the U.S. Nuclear Regulatory Commission or an agreement state. Regulations under the Federal Food, Drug, and Cosmetic Act authorizing the use of radioactive control devices in food production require certain additional labeling thereon which is found in 21 CFR Part 179.21. [Persons who own, receive, acquire, possess, or use a device pursuant to the general license contained in paragraph (a) of this subsection:]

[1. Shall not transfer, abandon, or dispose of the device, except by transfer to a person duly authorized to receive such device by a specific license or equivalent licensing document issued by the cabinet, the United States Atomic Energy Commission, or any agreement state, and shall furnish to the cabinet, within thirty (30) days after any transfer, a report containing the name of the manufacturer of the device, the type of device, the manufacturer's serial number of the device, and the name and address of the person receiving the device;]

[2. Shall assure that all labels affixed to the device at the time of receipt and bearing the statement, "removal of this label is prohibited" are maintained thereon and shall comply with all instructions contained in such labels;]

[3. Shall have the device tested for leakage of radioactive material and proper operation of the on-off mechanism and indicator, if any, at the time of installation of the device or replacement of the radioactive material on the premises of the general licensee and thereafter at no longer than six (6) month intervals or at such longer intervals not to exceed three (3) years as specified in the label required by subsection (3)(a)1 of this section; provided, that devices containing only krypton need not be tested for leakage, and devices containing only tritium need not be tested for any purpose;]

[4. Shall have the tests required by subparagraph 3 of this paragraph and all other services involving the radioactive material, its shielding and containment, performed by the supplier or other person duly authorized by a specific license or equivalent licensing document issued by the cabinet, the U. S. Atomic Energy Commission, or any agreement state, to manufacture, install, or service such devices;]

[5. Shall, within thirty (30) days after the occurrence of a failure of or damage to the shielding of the radioactive material or the on-off mechanism or indicator or upon the detection of 0.005 microcurie or more of removable radioactive material, furnish to the cabinet a report containing the name of the manufacturer of the device, the type of device, the manufacturer's serial number of the device and a brief description of the event and the remedial action taken; and shall maintain records of all tests performed on the devices as required under this section, including the dates and results of the tests and the names of the persons conducting the tests;]

[6. Shall, upon the occurrence of a failure of or damage to, or any indication of a possible failure of or damage to, the shielding or containment of the radioactive material or the on-off mechanism or indicator, immediately suspend operation of the device until it has been repaired by a person holding a specific license or equivalent licensing document issued by the cabinet, the United States Atomic Energy Commission, or any agreement state, to manufacture, install, or service such devices, or disposed of by transfer to a person holding a specific license or equivalent licensing document issued by the cabinet, the United States Atomic Energy Commission, or any agreement state to receive the radioactive material contained in the device;]

[7. Shall be exempt from the requirements of these regulations, except that such persons shall comply with the provisions relating to reports of theft or loss of sources of radiation

and the provisions relating to notification of incidents;]

[8. Shall within ten (10) days after the receipt of the device notify the cabinet of the type of device and the name and address of the supplier.]

(c) Any person who owns, receive, acquires, possesses, uses, or transfers radioactive material in a device pursuant to the general license in this subsection:

1. Shall assure that all labels affixed to the device at the time of receipt, and bearing a statement that removal of the label is prohibited, are maintained thereon and shall comply with all instructions and precautions provided by such labels;

2. Shall assure that the device is tested for leakage of radioactive material and proper operation of the "on-off" mechanism and indicator, if any, at no longer than six (6) month intervals or at such other intervals as are specified in the label; however,

a. Devices containing only krypton need not be tested for leakage of radioactive material, and

b. Devices containing only tritium or not more than 100 microcuries of other beta and/or gama-emitting material or ten (10) microcuries of alpha-emitting material and devices held in storage in the original shipping container prior to initial installation need not be tested for any purpose;

3. Shall assure that other testing, installation, servicing, and removal from installation involving the radioactive material, its shielding or containment, are performed:

a. In accordance with the instructions provided by the labels; or

b. By a person holding an applicable specific license from the cabinet, the U.S. Nuclear Regulatory Commission or an agreement state to perform such activities;

4. Shall maintain records showing compliance with the requirements of this subsection. The records shall show the results of tests. The records also shall show the names of persons and dates of performance of testing, installation, servicing, and removal from installation concerning the radioactive material, its shielding or containment. Records of tests for leakage of radioactive material shall be maintained for one (1) year after the next required leak test is performed or until the sealed source is transferred or disposed of. Records of tests of the "on-off" mechanism and indicator shall be maintained for one (1) year after the next required test of the "on-off" mechanism and indicator is performed or until the sealed source is transferred or disposed of. Records which are required by subparagraph 3 of this paragraph shall be maintained for a period of two (2) years from the date of the recorded event or until the device is transferred or disposed of;

5. Upon the occurrence of a failure of or damage to, or any indication of a possible failure of or damage to, the shielding of the radioactive material or the "on-off" mechanism or indicator, or upon the detection of 0.005 microcurie or more removable radioactive material, shall immediately suspend operation of the device until it has been repaired by the manufacturer or other person holding an applicable specific license from the cabinet, the U.S. Nuclear Regulatory Commission or an agreement state to repair such devices, or disposed of by transfer to a person authorized by an applicable specific license to receive the radioactive material contained in the device and, within thirty (30) days, furnish to the cabinet a report containing a brief description of the event and the remedial action taken;

6. Shall not abandon the device containing radioactive material;

7. Except as provided in subparagraph 8 of this paragraph, shall transfer or dispose of the device containing radioactive material only by transfer to a specific licensee of the cabinet, the U.S. Nuclear Regulatory Commission or an agreement state whose specific license authorizes him to receive the device and within thirty (30) days after transfer of a device to a specific licensee shall furnish to the cabinet a report containing identification of the device by manufacturer's name and model number and the name and address of the person receiving the device. No report is required if the device is transferred to the specific licensee in order to obtain a replacement device;

8. Shall transfer the device to another general licensee only:

a. Where the device remains in use at a particular location. In such case the transferor shall give the transferee a copy of this regulation and any safety documents identified in the label on the device and within thirty (30) days of the transfer, report to the cabinet the manufacturer's name and model number of device transferred, the name and address of the transferee, and the name and/or position of an individual who may constitute a point of contact between the cabinet and the transferee; or

b. Where the device is held in storage in the original shipping container at its intended location of use prior to initial use by a general licensee; and

9. Shall comply with the provisions of 902 KAR 100:020 for reporting radiation incidents, theft, or loss of licensed material, but shall be exempt from the other requirements of 902 KAR 100:020 and 902 KAR 100:165.

(d) The general license in this subsection does not authorize the manufacture of devices containing radioactive material.

(e) The general license provided in this subsection is subject to the provisions of 902 KAR 100:012, 902 KAR 100:015, 902 KAR 100:040, Sections 7, 13 and 14 and 902 KAR 100:070.

(f) A general license is hereby issued to any person who holds a specific license issued by the U.S. Nuclear Regulatory Commission or an agreement state authorizing the holder to manufacture, install, or service a device described in this subsection to install and service such device provided:

1. The device has been manufactured, labeled, installed, and serviced in accordance with applicable provisions of the specific license issued to such person by the U.S. Nuclear Regulatory Commission or an agreement state; and

2. Such person assures that any labels required to be affixed to the device under regulations of U.S. Nuclear Regulatory Commission or an agreement state which licensed manufacture of the device bear a statement that removal of the label is prohibited.

(4) Luminous safety devices for aircraft.

(a) A general license is hereby issued to own, receive, acquire, possess, and use tritium or promethium-147 contained in luminous safety devices for use in aircraft, provided:

1. Each device contains not more than ten (10) curies of tritium or 300 millicuries of promethium-147; and

2. Each device has been manufactured, assembled, or imported in accordance with a specific license issued by the United States Nuclear Regulatory [Atomic Energy] Commission, or each device has been manufactured or assembled in accordance with the specifications contained in a specific license [or equivalent licensing document] issued by the cabinet or any agreement state to the manufacturer or assembler of such device pursuant to licensing requirements equivalent to those in Section 32.53 of 10 CFR, Part 32, of the regulations of the United States Nuclear Regulatory [Atomic Energy] Commission.

(b) Persons who own, receive, acquire, possess, or use luminous safety devices pursuant to the general license in paragraph (a) of this subsection are exempt from the requirements of 902 KAR 100:020 and 902 KAR 100:165 [these regulations] except that they shall comply with the provisions relating to reports of theft or loss of sources of radiation and the provisions relating to notification of incidents.

(c) This general license does not authorize the manufacture, assembly, or repair of luminous safety devices containing tritium or promethium-147.

(d) This general license does not authorize the ownership, receipt, acquisition, possession or use of promethium-147 contained in instrument dials.

(e) This general license is subject to the provisions of 902 KAR 100:015, 902 KAR 100:040, Sections 7, 13, and 14 and 902 KAR 100:070.

(5) Calibration and reference sources.

(a) A general license is hereby issued to those persons listed below to own, receive, acquire, possess, use, and transfer, in accordance with the provisions of paragraphs (d) and (e) [(c) and (d)] of this subsection, americium-241 in the form of calibration or reference sources:

1. Any person who holds a specific license issued by the cabinet which authorizes him to receive, possess, use, and transfer radioactive material; and

2. Any person who holds a specific license issued by the U.S. Nuclear Regulatory [Atomic Energy] Commission which authorizes him to receive, possess, use, and transfer special nuclear material.

(b) A general license is hereby issued to receive, possess, use, and transfer plutonium in the form of calibration or reference sources in accordance with the provisions of paragraphs (d) and (e) [(c) and (d)] of this subsection to any person who holds a specific license issued by the cabinet which authorizes him to receive, possess, use, and transfer radioactive material.

(c) A general license is hereby issued to own, receive, possess, use, and transfer radium-226 in the form of calibration or reference sources in accordance with the provisions of paragraphs (d) and (e) of this subsection to any person who holds a specific license issued by the cabinet which authorizes him to receive, possess, use, and transfer radioactive material.

(d) [(c)] The general license in paragraphs (a), (b) and (c) of this subsection apply only to calibration or reference sources which have been manufactured in accordance with the specifications contained in a specific license issued to the manufacturer or importer of the sources by the United States Nuclear Regulatory [Atomic Energy] Commission pursuant to Section 32.57 of 10 CFR, Part 32, or Section 70.39 of 10 CFR, Part 70, or which may have been manufactured in accordance with the specifications contained in a specific license [or equivalent licensing document] issued to the manufacturer by the cabinet or any agreement state pursuant to licensing requirements equivalent to those contained in 902 KAR 100:058 [Section 32.67 of 10 CFR, Part 32, or Section 70.39 of 10 CFR, Part 70 of the regulations of the United States Atomic Energy Commission].

(e) [(d)] Persons who own, receive, acquire, possess, use, and transfer one (1) or more calibration or reference sources pursuant to these general licenses:

1. Shall not possess at any one (1) time, at any one (1) location of storage or use, more than five (5) microcuries of americium 241, [and] five (5) microcuries of plutonium or five (5) microcuries of radium-226 in such sources;

2. Shall not receive, possess, use, or transfer such source unless the source, or the storage container, bears a label which includes the following statement or a substantially similar statement which contains the information called for in the following statement:

"The receipt, possession, use and transfer of this source, Model _____, Serial No. _____, are subject to a general license [or equivalent authorization,] and the regulations of the United States Nuclear Regulatory [Atomic Energy] Commission or of a state with which the Commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label.

CAUTION - RADIOACTIVE MATERIAL - THIS SOURCE CONTAINS (AMERICIUM-241). (PLUTONIUM) (RADIUM-226)*. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

_____
(Name of Manufacturer or Importer)",

*Showing only the name of the appropriate material.

3. Shall not transfer, abandon, or dispose of such source except by transfer to a person authorized by a license from the cabinet, [or the] United States Nuclear Regulatory [Atomic Energy] Commission, or an agreement state to receive the source;

4. Shall store such source, except when the source is being used, in a closed container adequately designed and constructed to contain americium-241, [or] plutonium or radium-226 which might otherwise escape during storage; and

5. Shall not use such source for any purpose other than the calibration of radiation detectors or the standardization of other sources.

(e) The general licenses provided in paragraphs (a), (b) and (c) of this subsection are subject to the provisions of 902 KAR 100:015, 902 KAR 100:020, 902 KAR 100:040, Sections 7, 13, and 14, 902 KAR 100:070, and 902 KAR 100:165. [These general licenses do not authorize the manufacture of calibration or reference sources containing americium 241 or plutonium.]

(f) These general licenses do not authorize the manufacture of calibration or reference sources containing americium-241, plutonium, or

radium-226.

(6) A general license is hereby issued to own radioactive material without regard to quantity. The general license under this subsection does not authorize the licensee to manufacture, produce, transfer, receive, possess, or use radioactive material.

(7) Ice detection devices:

(a) A general license is hereby issued to own, receive, acquire, possess, use, and transfer strontium-90 contained in ice detection devices, provided each device contains not more than fifty (50) microcuries of strontium-90 and each device has been manufactured or imported in accordance with a specific license, issued by the United States Nuclear Regulatory [Atomic Energy] Commission or each device has been manufactured in accordance with the specifications contained in a specific license [or equivalent licensing document] issued by the cabinet or any agreement state to the manufacturer of such device pursuant to licensing requirements equivalent to those in 902 KAR 100:058 [Section 32.61 of 10 CFR, Part 32, of the regulations of the United States Atomic Energy Commission].

(b) Persons who own, receive, acquire, possess, use, or transfer strontium-90 contained in ice detection devices pursuant to the general license in paragraph (a) of this subsection:

1. Shall, upon occurrence of visually observable damage, such as a bend or crack or discoloration from overheating to the device, discontinue use of the device until it has been inspected, tested for leakage, and repaired by a person holding a specific license [or equivalent licensing document] from the cabinet, United States Nuclear Regulatory [Atomic Energy] Commission or an agreement state to manufacture or service such devices; or shall dispose of the device pursuant to the provisions of these regulations [this regulation];

2. Shall assure that all labels affixed to the device at the time of receipt, and which bear a statement which prohibits removal of the labels, are maintained thereon;

3. Are exempt from the other requirements of these regulations except that such persons shall comply with 902 KAR 100:015, 902 KAR 100:020, Sections 16 and 17, 902 KAR 100:021, 902 KAR 100:040, Sections 7, 13, and 14 and 902 KAR 100:070 [the provisions relating to waste disposal, reports of theft or loss of sources of radiation and notification of incidents].

(c) This general license does not authorize the manufacture, assembly, disassembly or repair of strontium-90 sources in ice detection devices.

Section 4. General License for Use of Radioactive Material for Certain In Vitro Clinical or Laboratory Testing. (1) A general license is hereby issued to any physician, veterinarian, clinical laboratory, or hospital to receive, acquire, possess, transfer or use, for any of the following stated tests, in accordance with the provisions of subsections (2), (3), (4), (5), and (6) of this section, the following radioactive materials in pre-packaged units for use in IN Vitro clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals:

(a) Iodine-125, in units not exceeding ten (10) microcuries each [for use in in vitro clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals].

(b) Iodine-131, in units not exceeding ten (10) microcuries each [for use in in vitro clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals].

(c) Carbon-14, in units not exceeding ten (10) microcuries each [for use in In Vitro clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals].

(d) Hydrogen-3 (Tritium), in units not exceeding fifty (50) microcuries each [for use in in vitro clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals].

(e) Iron-59, in units not exceeding twenty (20) microcuries each [for use in in vitro clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings, or animals].

(f) Cobalt-57, in units not exceeding ten (10) microcuries each.

(g) Mock iodine-125 reference or calibration sources, in units not exceeding 0.05 microcurie of iodine-29 and 0.005 microcurie of americium-241 each.

(h) Selenium-75, in units not exceeding ten (10) microcuries each.

(2) No person shall receive, acquire, possess, use or transfer radioactive material pursuant to the general license established by subsection (1) of this section until he has filed form KR-251, "Registration Certificate - In Vitro Testing" with the cabinet and received from the cabinet a validated copy of form KR-251 with certification number assigned. The physician, veterinarian, clinical laboratory, or hospital shall furnish on form KR-251, the following information and such other information as may be required by that form:

(a) Name and address of the physician, veterinarian, clinical laboratory, or hospital;

(b) The location of use; and

(c) A statement that the physician, veterinarian, clinical laboratory, or hospital has appropriate radiation measuring instruments to carry out in vitro clinical or laboratory tests with radioactive materials as authorized under the general license in subsection (1) of this section and that such tests will be performed only by personnel competent in the use of such instruments and in the handling of the radioactive material.

(3) A person who receives, acquires, possesses or uses radioactive material pursuant to the general license established by subsection (1) of this section shall comply with the following:

(a) The general licensee shall not possess at any one (1) time, pursuant to the general license in subsection (1) of this section, at any one (1) location of storage or use, a total amount of iodine-125, iodine-131, selenium-75, cobalt-57 and/or iron-59 in excess of 200 microcuries.

(b) The general licensee shall store the radioactive material, until used, in the original shipping container or in a container providing equivalent radiation protection.

(c) The general licensee shall use the radioactive material only for the uses authorized by subsection (1) of this section.

(d) The general licensee shall not transfer the radioactive material to a person who is not authorized to receive it pursuant to a license issued by the cabinet, the United States Nuclear Regulatory [Atomic Energy] Commission, or any agreement state, nor transfer the radioactive material in any manner other than in the unopened, labeled shipping container as received from the supplier.

(e) The general licensee shall dispose of the Mock iodine-125 reference or calibration sources as required by 902 KAR 100:021, Section 2.

(4) The general licensee shall not receive, acquire, possess, or use radioactive material pursuant to subsection (1) of this section:

(a) Except as pre-packaged units which are labeled in accordance with the provisions of a specific license issued under these regulations or in accordance with the provisions of an applicable [a] specific license issued pursuant to 902 KAR 100:058 or in accordance with the provisions of a specific license issued by the United States Nuclear Regulatory [Atomic Energy] Commission, or any agreement state which authorizes the manufacture and distribution of iodine-125, iodine-131, carbon-14, hydrogen-3 (tritium), Selenium-75, cobalt-57, Mock iodine-125 or iron-59 [for distribution] to persons generally licensed under subsection (1) of this section [Section 6(8) of this regulation] or its equivalent;

(b) Unless the following statement, or a substantially similar statement which contains the information called for in the following statement, appears on a label affixed to each pre-packaged unit or appears in a leaflet or brochure which accompanies the package:

"This radioactive material may be received, acquired, possessed, and used only by physicians, veterinarians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use and transfer are subject to the regulations and a general license of the United States Nuclear Regulatory [Atomic Energy] Commission or of a state with which the commission has entered into an agreement for the exercise of regulatory authority.

_____."
(Name of Manufacturer)

(5) The physician, veterinarian, clinical laboratory, or hospital possessing or using radioactive material under the general license of subsection (1) of this section shall report in writing to the cabinet, any changes in the information furnished by him in the "Registration Certificate - In Vitro Testing," form KR 251. The report shall be furnished within thirty (30) days after the effective date of such change.

(6) Any person using radioactive material pursuant to the general license of subsection (1) of this section is exempt from the requirements 902 KAR 100:020, 902 KAR 100:021, and 902 KAR 100:165, except that such person using the Mock-iodine 125 shall comply with the provisions of 902 KAR 100:020, Sections 16 and 17 and 902 KAR 100:021. [of the cabinet's regulations relating to standards for protection against radiation and provision for notices, instructions and reports to workers.]

Section 5. General License for Medical Diagnostic Uses. (1) A general license is hereby issued to any physician to receive, possess, transfer, or use radioactive material set forth below for [any of] the [following] stated diagnostic uses, provided, however, that the use is in accordance with the provisions of subsections (2), (3), and (4) of this section, the [following] radioactive material is in the form of capsules, disposable [disposal] syringes, or other [forms of] pre-packaged individual doses; and the radioactive material has been manufactured in accordance with a specific license issued [pursuant to these regulations] by the cabinet pursuant to 902 KAR 100:058, or by the United States Nuclear Regulatory [Atomic Energy] Commission or any agreement state pursuant to equivalent regulations authorizing distribution to persons generally licensed pursuant to [under the general license granted in] this subsection or its equivalent:

(a) Iodine-131 as sodium iodide ($Na^{131}I$) for measurement of thyroid uptake;

(b) Iodine-131 as iodinated human serum albumin (IHSA) for determinations of blood and blood plasma volume;

(c) Iodine-125 as iodinated human serum albumin (IHSA) for determinations of blood and blood plasma volume;

(d) Cobalt-57 for the measurement of intestinal absorption of cyanocobalamin;

(e) Cobalt-58 for the measurement of intestinal absorption of cyanocobalamin;

(f) Cobalt-60 for the measurement of intestinal absorption of cyanocobalamin;

(g) Chromium-51 as sodium radiochromate [chromate] for determination of red blood cell volumes and studies of red blood cell survival time.

(2) Manufacturers of radiopharmaceuticals which are under a general license shall affix a certain identifying label to the container or in the leaflet or brochure which accompanies the radiopharmaceutical as otherwise provided in these regulations.

(3) No physician shall receive, possess, use, or transfer radioactive material pursuant to the general license established by subsection (1) of this section until he has filed form KR-252, "Registration Certificate - Medical Use of Radioactive Material" with the cabinet and received from the cabinet a validated copy of the form KR-252. The generally licensed physician shall furnish on form KR-252 the following information and such other information as may be required by that form:

(a) Name and address of the generally licensed physician;

(b) A statement that the generally licensed physician is a duly licensed physician authorized to dispense drugs in the practice of medicine in the State of Kentucky and specifying the license number; and

(c) A statement that the generally licensed physician has appropriate radiation measuring instruments to carry out the diagnostic procedures for which he proposes to use the radioactive material under the general license of this section and that he is competent in the use of such instruments.

(4) A physician who receives, possesses or uses a pharmaceutical containing radioactive material pursuant to the general license established by subsection (1) of this section shall comply with the following:

(a) He shall not possess at any one (1) time pursuant to the general license in subsection (1) of this section more than:

1. 200 microcuries of iodine-131;
2. 200 microcuries of iodine-125;
3. Five (5) microcuries of cobalt-57;
4. Five (5) microcuries of cobalt-60;
5. Five (5) microcuries of cobalt-58; and
6. 200 microcuries of chromium-51.

(b) He shall store the pharmaceutical, until administered, in the original shipping container or a container providing the equivalent radiation protection.

(c) He shall use the pharmaceutical only for the uses authorized by subsection (1) of this section.

(d) He shall not administer the pharmaceutical to a woman with confirmed pregnancy or to a person under eighteen (18) years of age.

(e) He shall not transfer the radioactive material to a person who is not authorized to receive it pursuant to a license issued by the cabinet, the United States Nuclear Regulatory [Atomic Energy] Commission or any agreement state, or in any manner other than in the unopened, labeled shipping container as received from the supplier, except by administering it to a patient.

(5) The generally licensed physician possessing or using radioactive material under the general license of subsection (1) of this section shall report [in duplicate] to the cabinet, any changes in the information furnished by him in the "Registration Certificate - Medical Use of Radioactive Material," form KR-252. The report shall be submitted within thirty (30) days after the effective date of change.

(6) Any person using radioactive material pursuant to the general license of subsection (1) of this section is exempt from the requirements of 902 KAR 100:020, 902 KAR 100:021 and 902 KAR 100:165.

[Section 6. General Licensing of Certain Named Devices. The following devices and equipment incorporating radioactive material, when manufactured, tested, and labeled by the manufacturer in accordance with the specifications contained in a specific license or equivalent licensing document issued by the cabinet, the United States Atomic Energy Commission, or any other Agreement State are placed under a general license pursuant to this regulation:]

[(1) Devices designed for use as static eliminators which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries of polonium-210 per device; and]

[(2) Devices designated for ionization of air which contain, as a sealed source or sources, radioactive material consisting of a total of not more than fifty (50) microcuries of polonium-210 per device or a total of not more than fifty (50) millicuries of hydrogen-3 (tritium) per device.]

C HERNANDEZ, M.D., M.P.H.
E. AUSTIN, JR. Secretary

APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing. R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager

(1) Type and number of entities affected:

(a) Direct and indirect costs or savings to those affected:

1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs (note any effects upon competition): NA

(b) Reporting and paperwork requirements: None required

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs: NA

(b) Reporting and paperwork requirements: None required

(3) Assessment of anticipated effect on state and local revenues: None

(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.

(a) Necessity of proposed regulation if in conflict: NA

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: NA

(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 100:051. Specific licenses for human use.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and [to regulate] the handling and disposal of radioactive waste. The purpose of this regulation is to provide for the issuance of specific licenses for the possession, use and

transfer of radioactive material for human use.

Section 1. Applicability. This regulation establishes requirements for specific licensees to possess, use or transfer radioactive material for human uses.

Section 2. Specific License Requirements for Human Use of Radioactive Material in Institutions. An application by an institution for a specific license for human use of radioactive material shall be approved [issued] only if:

(1) The applicant satisfies the general requirements specified in 902 KAR 100:040 [these regulations];

(2) The applicant has appointed a radiation safety committee to coordinate the use of radioactive material throughout that institution and to maintain surveillance over the institution's radiation safety program. Membership of the committee shall include at least the following: an authorized user for each type of use permitted by the license [a specialist (where applicable a physician) from each department where radioactive material is used], a representative of the nursing staff, a representative of the institution's management, and the Radiation Safety Officer; [a person trained in radiation safety.]

(3) The applicant possesses adequate facilities for the clinical care of patients;

(4) The physician designated on the application as the individual user has substantial experience in the proposed use, the handling and administration of radioisotopes and where applicable, the clinical management of radioactive patients; and

(5) If the application is for a license to use unspecified quantities or multiple types of radioactive material, the applicant has previously received a reasonable number of licenses for a variety of radioactive material for a variety of human uses.

Section 3. Specific License Requirements for Individual Physicians for Human Use of Radioactive Material. (1) A license [An] application by an individual physician or group of physicians for a specific license for human use of radioactive material shall be approved [issued] only if:

(a) The applicant satisfies the general requirements specified in 902 KAR 100:040 [these regulations];

(b) The application is for use in the applicant's practice in an office(s) outside a medical institution;

(c) The applicant has access to a hospital possessing adequate facilities to hospitalize and monitor the applicant's radioactive patients whenever it is advisable; and

(d) The applicant has extensive experience in the proposed use, the handling and administration of radioisotopes and where applicable, the clinical management of [radioactive] patients. The physician(s) shall furnish suitable evidence of such experience with the application. A statement from the radiation safety committee in the institution where the applicant acquired experience, indicating its amount and nature, may be submitted as evidence of such experience.

(2) A license [An] application by an individual physician or group of physicians for a specific license to receive, possess, or use radioactive material on the premises of a medical institution shall be approved [issued] only if:

(a) The applicant satisfies the general requirements specified in 902 KAR 100:040 [these regulations];

(b) The use of radioactive material is limited to:

1. The administration of radiopharmaceuticals for diagnostic or therapeutic purposes;

2. The performance of diagnostic studies on patients to whom a radiopharmaceutical has been administered;

3. The performance of In Vitro diagnostic studies; or

4. The calibration and quality control checks of radioactive assay instrumentation, radiation safety instrumentation, and diagnostic instrumentation.

(c) The physician brings the radioactive material with him and removes the radioactive material when he departs. The institution cannot receive, possess or store radioactive material other than the amount of material remaining in the patient; and

(d) The medical institution does not hold a radioactive material license under these regulations.

Section 4. Specific License Requirements for Human Use of Radioactive Material in Sealed Sources. A license [An] application for a specific license for use of a sealed source for human use shall be approved [issued] only if:

(1) The applicant satisfies the general requirements specified in 902 KAR 100:040 [these regulations]; and

(2) The applicant or, if the application is made by an institution, the individual user:

(a) Has specialized training in the therapeutic use of the radioactive device considered (teletherapy unit, beta applicator, etc.) or has experience equivalent to such training; and

(b) Is a physician.

Section 5. Specific Licenses for Certain Groups of Medical Uses of Radioactive Material. Subject to the provisions of Section 6 of this regulation, an application for a specific license pursuant to Sections 2, 3, and 4 of this regulation for any medical use or uses of radioactive material specified in one (1) or more of Groups I through V, inclusive, of 902 KAR 100:075 will be approved for all the uses within the group or groups which include the use or uses specified in the application if:

(1) The applicant satisfies the requirements of Sections 2, 3 and 4 of this regulation;

(2) The applicant, or the physician designated in the application as the individual user, has adequate clinical experience in the types of uses included in the group or groups;

(3) The applicant, or the physicians and all other personnel who will be involved in the preparation and use of the radioactive material, have adequate training and experience in the handling of radioactive material appropriate to their participation in the uses included in the group or groups;

(4) The applicant's radiation detection and measuring instrumentation is adequate for conducting the procedures involved in the uses included in the group or groups; and

(5) The applicant's radiation safety operating procedures are adequate for handling and disposal of the radioactive material involved in the uses included in the group or groups.

Section 6. Group Licensing Requirements. Any licensee who is authorized to use radioactive material pursuant to one (1) or more groups is subject to the following conditions:

(1) For Groups I, II, IV, and V of 902 KAR 100:075, no licensee shall receive, possess, or use radioactive material except as a radiopharmaceutical manufactured in the form to be administered to the patient, labeled, packaged, and distributed in accordance with a specific license issued by the cabinet pursuant to 902 KAR 100:058 or the U.S. Nuclear Regulatory Commission or an agreement state pursuant to equivalent regulations.

(2) For Group III of 902 KAR 100:075, no licensee shall receive, possess, or use generators or reagent kits containing radioactive material or shall use reagent kits that do not contain radioactive material to prepare radiopharmaceuticals containing radioactive material, except:

(a) Reagent kits not containing radioactive material that are approved by the cabinet, the U.S. Nuclear Regulatory Commission, or an agreement state for use by persons licensed pursuant to this regulation and 902 KAR 100:075 or equivalent regulations; or

(b) Generators or reagent kits containing radioactive material that are manufactured, labeled, packaged, and distributed in accordance with a specific license issued by the cabinet pursuant to 902 KAR 100:058, the U.S. Nuclear Regulatory Commission or by an agreement state pursuant to equivalent regulations.

(3) For Group III of 902 KAR 100:075, any licensee or registrant using generators or reagent kits shall:

(a) Elute the generator, or process radioactive material with the reagent kit, in accordance with instructions approved by the cabinet, U.S. Nuclear Regulatory Commission, or an agreement state and furnished by the manufacturer on the label attached to or in the leaflet or brochure that accompanies the generator or reagent kit;

(b) Before administration to patients, cause each elution or extraction of technetium-99m from a molybdenum-99/technetium-99m generator to be tested to determine either the total molybdenum-99 activity or the concentration of molybdenum-99. This testing shall be conducted according to written procedures and by personnel who have been specifically trained to perform the test;

(c) Prohibit the administration to patients of technetium-99m containing more than one (1) microcurie of molybdenum-99 per millicurie of technetium-99m, or more than five (5) microcuries of molybdenum-99 per administered dose, at the time of administration; and

(d) Maintain records of the molybdenum-99 test conducted on each elution from the generator for inspection by the cabinet for three (3) years following the date of the test.

(4) For groups I, II, and III of 902 KAR 100:075, any licensee using radioactive material for clinical procedures other than those specified in the product labeling (package insert) shall comply with the product labeling regarding:

(a) Chemical and physical form;

(b) Route of administration; and

(c) Dosage range.

(5) The radiopharmaceutical, technetium-99m pentectate as an aerosol for lung function studies, is not subject to the restrictions of subsection (4) of this section.

(6) Radioactive aerosols must be administered with a closed shielded system that either is vented to the outside through an air exhaust or provides for collection and disposal of the aerosol.

Section 7. In Vitro Uses. Any licensee who is licensed pursuant to this regulation for one (1) or more of the medical use groups in 902 KAR 100:075 also is authorized to use radioactive material under the general license in 902 KAR 100:050, Section 4, for the specified In Vitro uses without filing form KR-251 as required by 902 KAR 100:050; provided, that the licensee is subject to the other provisions of 902 KAR 100:050, Section 4.

Section 8. Calibration and Reference Standards. Any licensee who is licensed pursuant to this regulation for one (1) or more of the medical use groups in 902 KAR 100:075 also is authorized, subject to the provisions of this regulation, to receive, possess, and use for calibration and reference standard:

(a) Any radioactive material listed in Group I, Group II, or Group III of 902 KAR 100:075 with a half-life not longer than 100 days, in amounts not to exceed fifteen (15) millicuries, total;

(b) Any radioactive material listed in Group I, Group II, or Group III of 902 KAR 100:075 with a half-life greater than 100 days, in amounts not to exceed 200 microcuries, total;

(c) Technetium-99m in amounts not to exceed thirty (30) millicuries; and

(d) Any radioactive material, in amounts not to exceed three (3) millicuries per source, contained in calibration or reference sources that have been manufactured, labeled, packaged, and distributed in accordance with a specific license issued by the cabinet pursuant to 902 KAR 100:058, the U.S. Nuclear Regulatory Commission or by an agreement state pursuant to equivalent regulations.

(2) Any licensee who possesses sealed sources as calibration or reference sources pursuant to this section shall cause each sealed source to be leak tested in accordance with 902 KAR 100:060 and 902 KAR 100:095.

(3) Any licensee who possesses and uses calibration and reference sources pursuant to this section shall:

(a) Follow the radiation safety and handling instructions approved by the cabinet, the U.S. Nuclear Regulatory Commission, or an agreement state and furnished by the manufacturer on the label attached to the source, or permanent container thereof, or in the leaflet or brochure that accompanies the source, and maintain such instruction in a legible and conveniently available form; and

(b) Conduct a quarterly physical inventory to account for all sources received and possessed. Records of the inventories shall be maintained for inspection by the cabinet and shall include the quantities and kinds of radioactive material, location of sources, and the date of the inventory.

Section 9. 902 KAR 100:077, Group licensing, is hereby repealed.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager, Radiation & Product Safety Branch, Phone 564-3700.
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 100:052. Broad scope licenses.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. The purpose of this regulation is to prescribe requirements for the issuance of specific licenses of broad scope for radioactive material.

Section 1. Applicability. This regulation establishes requirements for specific licensees to possess, use or transfer radioactive material for licenses of broad scope.

Section 2. Types of Specific Licenses of Broad Scope. (1) A "Type A specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use and transfer of any chemical or physical form of the radioactive material specified in the license, but not exceeding quantities specified in the license, for any authorized purpose. The quantities specified are usually in the multicurie range.
(2) A "Type B specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use and transfer of any chemical or physical form of radioactive material specified in 902 KAR 100:090, relating to broad license quantities, for any authorized purpose. The possession limit for a Type B broad license, if only one (1) radionuclide is possessed thereunder, is the quantity specified for that radionuclide in Column I of the table in Section 2 of 902 KAR 100:090. If two (2) or more radionuclides are possessed thereunder, the possession limit for each is determined as follows: For each radionuclide, determine the ratio of the quantity possessed to the applicable quantity specified in Column I of the table in Section 2 of 902 KAR 100:090 for that radionuclide. The sum of the ratios for all radionuclides possessed under the license shall not exceed unity.
(3) A "Type C specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use and transfer of any chemical or physical form of radioactive material specified in 902 KAR 100:090, relating to broad licensed quantities, for any authorized purpose. The possession limit for a Type C broad license, if only one (1) radionuclide is possessed thereunder, is the quantity specified for that radionuclide in Column II of the table in Section 2 of 902 KAR 100:090. If two (2) or more radionuclides are possessed thereunder, the possession limit is determined for each as follows: For each radionuclide determine the ratio of the quantity possessed to the applicable quantity specified in Column II of the table in Section 2 of 902 KAR 100:090 for that radionuclide. The sum of the ratios for all radionuclides possessed under the license shall not exceed unity.

Section 3. Requirements for the Issuance of a Type A Specific License of Broad Scope. An application for a Type A specific license of broad scope will be approved if:
(1) The applicant satisfies the general requirements specified in 902 KAR 100:040 [these regulations];
(2) The applicant has engaged in a reasonable number of activities involving the use of radioactive material; and

(3) The applicant has established administrative controls and provisions relating to organization and management, procedures, recordkeeping, material control and accounting, and management review that are necessary to assure safe operations, including:

(a) The establishment of a radiation safety committee composed of such persons as a radiation [radiological] safety officer, a representative of management, and persons trained and experienced in the safe use of radioactive materials;

(b) The appointment of a radiation [radiological] safety officer who is qualified by training and experienced in radiation protection, and who is available for advice and assistance on radiological safety matters; and

(c) The establishment of appropriate administrative procedures to assure control of procurement and use of radioactive material; completion of safety evaluation of proposed uses of radioactive material which take into consideration such matters as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and review, approval, and recording by the radiation safety committee of safety evaluations of proposed uses prepared in accordance with this subsection prior to use of the radioactive material.

Section 4. Requirements for the Issuance of a Type B Specific License of Broad Scope. An application for a Type B specific license of broad scope will be approved if:

(1) The applicant satisfies the general requirements specified in 902 KAR 100:040 [these regulations]; and

(2) The applicant has established administrative controls and provisions relating to organization and management, procedures, recordkeeping, material control and accounting, and management review that are necessary to assure safe operations, including:

(a) The appointment of a radiation [radiological] safety officer who is qualified by training and experience in radiation protection, and who is available for advice and assistance on radiological safety matters; and

(b) The establishment of appropriate administrative procedures to assure control of procurement and use of radioactive material; completion of safety evaluations or proposed uses of radioactive materials which take into consideration such matters as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and review, approval and recording by the radiation [radiological] safety officer of safety evaluations of proposed uses prepared in accordance with this subsection prior to use of the radioactive material.

Section 5. Requirements for the Issuance of a Type C Specific License of Broad Scope. An application for a Type C specific license of broad scope will be approved if:

(1) The applicant satisfies the general requirements specified in 902 KAR 100:040 [these regulations];

(2) The applicant submits a statement that radioactive material will be used only by, or under the direct supervision of, individuals who have received:

(a) A college degree at the bachelor level, or equivalent training and experience, in the physical or biological sciences or in engineering; and

(b) At least forty (40) hours of training and experience in the safe handling of radioactive materials, and in the characteristics of ionizing radiation, units of radiation dose and quantities, radiation detection instrumentation, and biological hazards of exposure to radiation appropriate to the type and forms of radioactive material to be used; and

(3) The applicant has established administrative controls and provisions relating to procurement of radioactive material, procedures, recordkeeping, material control and accounting, and management review necessary to assure safe operations.

Section 6. Prohibited Acts and Conditions for Specific Licenses of Broad Scope. (1) Unless otherwise specifically authorized, persons licensed pursuant to these regulations shall not:

(a) Conduct tracer studies in the environment involving direct release of radioactive material;

(b) Receive, acquire, own, possess, use, or transfer, [or import] devices containing 100,000 curies or more of radioactive material in sealed sources used for irradiation of materials;

(c) Conduct activities for which a specific license issued by the cabinet under 902 KAR 100:051 or 902 KAR 100:058 is required; or

(d) Add or cause the addition of radioactive material to any food, beverage, cosmetic, drug, or other product designed for ingestion or inhalation by, or application to, a human being.

(2) Each Type A specific license of broad scope issued under this regulation [section] shall be subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, individuals approved by the licensee's radiation safety committee.

(3) Each Type B specific license of broad scope issued under this regulation [section] shall be subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, individuals approved by the licensee's radiation [radiological] safety officer.

(4) Each Type C specific license of broad scope issued under this regulation [section] shall be subject to the condition that radioactive material possessed under this license may only be used by, or under the direct supervision of, individuals who satisfy the requirements of Section 5 of this regulation.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager, Radiation & Product Safety Branch, Phone 564-3700.

(1) Type and number of entities affected:

(a) Direct and indirect costs or savings to those affected:

1. First year: N/A

2. Continuing costs or savings: N/A

3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A

(b) Reporting and paperwork requirements: None required.

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: N/A

2. Continuing costs or savings: N/A

3. Additional factors increasing or decreasing costs: N/A

(b) Reporting and paperwork requirements: None required.

(3) Assessment of anticipated effect on state and local revenues: None

(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.

(a) Necessity of proposed regulation if in conflict: N/A

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A

(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

## CABINET FOR HUMAN RESOURCES
## Department for Health Services
## (Proposed Amendment)

**902 KAR 100:058. Specific licenses to manufacture, assemble, repair, or distribute products [Sale or distribution to persons exempted from licensing].**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)

PURSUANT TO: KRS 194.050, 211.090, 211.844

NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to regulate the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. The purpose of this regulation is to prescribe requirements for the issuance of specific licenses to persons who manufacture, assemble, repair, or distribute commodities, products, or devices which contain radioactive material [items containing radioactive material for sale or distribution to persons exempted from licensing requirements of these regulations or persons generally licensed under these regulations].

Section 1. Applicability. The requirements in this regulation apply to all licensees who manufacture, assemble, repair, or distribute commodities, products, or devices [items containing radioactive material for sale or distribution to persons exempted from licensing requirements of these regulations or persons generally licensed under these regulations].

Section 2. Licensing the Introduction of Radioactive Material into Products in Exempt Concentrations [into Products or Materials]. In addition to the requirements set forth in 902 KAR 100:040, Section 5, [An application for] a specific license authorizing the introduction of radioactive material into a product or material owned by or in the possession of the licensee or another to be transferred to persons exempt under 902 KAR 100:045, Section 3(1)(a) shall be issued [only] if:

(1) The applicant submits a description of the product or material into which the radioactive material will be introduced, intended use of the radioactive material and the product into which it is introduced, method of introduction, initial concentration of the radioactive material in the product or material, control methods to assure that no more than the specified concentration is introduced into the product or material, estimated time interval between introduction and transfer of the product or material and estimated concentrations of the radioactive material in the product or material at the time of transfer [by the licensee]; and

(2) The applicant provides reasonable assurance that the concentrations of the radioactive material at the time of transfer will not exceed the concentrations in 902 KAR 100:085, relating to concentrations of certain radionuclides, [and] that reconcentration of the radioactive material in concentrations exceeding those in 902 KAR 100:085 is not likely, [and that the product or material is not likely to be inhaled or ingested and] that use of lower concentrations is not feasible, and that the product or material is not likely to be incorporated in any food, beverage, cosmetic, drug or other commodity or product designed for ingestion or inhalation by, or application to, a human being.

(3) Each person licensed under this regulation shall file an annual report with the cabinet which shall identify the type and quantity of each product or material into which radioactive material has been introduced during the reporting period; name and address of the person who owned or possessed the product or material, into which radioactive material has been introduced, at the time of introduction; the type and quantity of radionuclide introduced into each such product or material; and the initial concentrations of the radionuclide in the product or material at the time of transfer of the radioactive material by the licensee. If no transfers of radioactive material have been made pursuant to this regulation during the reporting period, the report shall so indicate. The report shall cover the year ending June 30, and shall be filed within thirty (30) days thereafter.

Section 3. Licensing the Manufacture and Distribution of Devices [Containing Radioactive Material] to Persons Generally Licensed under 902 KAR 100:050. An application for a specific license to distribute certain devices containing radioactive material, excluding special nuclear material, to persons generally licensed shall be

issued only if:

(1) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control [procedures], labels [labeling], proposed uses, installation, servicing, leak testing, operating and safety instructions and potential hazards of the device to provide reasonable assurance that:

(a) Under accident conditions such as fire and explosion associated with handling, storage, and use of the device, it is unlikely that any person would receive an external radiation dose or dose commitment in excess of the following organ doses:

1. Whole body; head and trunk; active blood-forming organs; gonads; or lens of eye . . . . . 15 rems

2. Hands and forearms; feet and ankles; localized areas of skin averaged over areas no larger than one (1) square centimeter . 200 rems

3. Other organs . . . . . 50 rems

[The radioactive material contained in the device will not be lost;]

(b) Under ordinary conditions of handling, storage, and use of the device, the radioactive material contained in the device will not be released or inadvertently removed from the device, and it is unlikely that any person will receive in any period of one (1) calendar quarter a dose in excess of ten (10) percent of the limits specified in 902 KAR 100:020, Section 2 [No individual will receive a radiation exposure to a major portion of his body in excess of five-tenths (0.5) rem in a year under ordinary circumstances of use];

(c) The device can be safely operated by individuals not having training in radiological protection. [; and]

[(d) The radioactive material within the device will not be accessible to unauthorized individuals.]

(2) Each device bears a durable, legible, clearly visible label or labels approved by the cabinet, which contain in a clearly identified and separate statement: [In describing the label or labels and contents thereon to be affixed to the device, the applicant shall separately indicate those instructions and precautions which are necessary to assure safe operation of the device. Such instructions and precautions must be contained on labels bearing the statement, "removal of this label is prohibited."]

(a) Instructions and precautions necessary to assure safe installation, operation, and servicing of the device; documents such as operating and service manuals may be identified in the label and used to provide this information;

(b) The requirement, or lack of requirement, for leak testing, or for testing any "on-off" mechanism and indicator, including the maximum time interval for such testing, and the identification of radioactive material by isotope, quantity of radioactivity, and date of determination of the quantity; and

(c) The information called for in the following statement, in the same or substantially similar form:

"The receipt, possession, use, and transfer of this device, Model ----- , Serial No. -------, are subject to a general license or the equivalent and the regulations of the U.S. Nuclear Regulatory Commission or an agreement state. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

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Name of manufacturer or distributor"

The model, serial number, and name of the manufacturer or distributor may be omitted from this label provided the information is elsewhere specified in labeling affixed to the device.

(3) In the event the applicant desires that the device be required to be tested for proper operation of the "on-off" mechanism and indicator, if any, or [and] for leakage of radioactive material, subsequent to the initial tests required by these regulations at intervals longer than six (6) months but not exceeding three (3) years, the applicant [he] shall include in the [his] application sufficient information to demonstrate that such longer interval is justified by performance characteristics of the device or similar devices, and by design features which have a significant bearing on the probability or consequences of leakage of radioactive material from the device or failure of the "on-off" mechanism and indicator. In determining the acceptable interval for the test for [of] leakage of radioactive material, the cabinet will consider information on particulars which includes, but is [are] not [necessarily] limited to:

(a) Primary containment or [(]source capsule[)];

(b) Protection of primary containment;

(c) Method of sealing containment;

(d) Containment construction materials;

(e) Form of contained radioactive material;

(f) Maximum temperature withstood during prototype tests;

(g) Maximum pressure withstood during prototype tests;

(h) Maximum quantity of contained radioactive material;

(i) Radiotoxicity of contained radioactive material; and

(j) Operating experience with identical devices or similarly designed and constructed devices.

(4) In the event the applicant desires that the general licensee under 902 KAR 100:050, Section 3, or under equivalent regulations of the U.S. Nuclear Regulatory Commission or an agreement state be authorized to install the device, collect the sample to be analyzed by a specific licensee for leakage of radioactive material, service the device, test the "on-off" mechanism and indicator, or remove the device from installation, the applicant shall include in the application written instructions to be followed by the general licensee, estimated calendar quarter doses associated with such activity or activities, and bases for such estimates. The submitted information shall demonstrate that performance of such activity or activities by an individual untrained in radiological protection, in addition to other handling, storage, and use of devices under the general license, is unlikely to cause that individual to receive a calendar quarter dose in excess of ten (10) percent of the limits specified in 902 KAR 100:020, Section 2.

(5) Each person licensed under this regulation

to distribute devices to generally licensed persons shall:

(a) Furnish a copy of the general license contained in 902 KAR 100:050, Section 3, to each person the licensee, directly or through an intermediate person, transfers radioactive material in a device for use pursuant to the general license;

(b) Furnish a copy of the general license contained in the U.S. Nuclear Regulatory Commission's or agreement state's regulation equivalent, or alternatively, furnish a copy of the general license to each person the licensee directly or through an intermediate person transfers radioactive material in a device for use pursuant to the general license of the U.S. Nuclear Regulatory Commission or the agreement state. If a copy of the general license is furnished to such a person, it shall be accompanied by a note explaining that the use of the device is regulated by the U.S. Nuclear Regulatory Commission or agreement state under requirements substantially the same as those in 902 KAR 100:050, Section 3;

(c) Report to the cabinet all transfers of such devices to persons for use under the general license. Such report shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the cabinet and the general license, the type and model number of device transferred, and the quantity and type of radioactive material contained in the device. If one (1) or more intermediate persons will temporarily possess the device at the intended place of use prior to its possession by the user, the report shall include identification of each intermediate person by name, address, contact, and relationship to the intended user. If no transfers have been made to persons generally licensed during the reporting period, the report shall so indicate. The report shall cover each calendar quarter and shall be filed within thirty (30) days thereafter;

(d) Furnish reports to other agencies.

1. Report to the U.S. Nuclear Regulatory Commission all transfers of such devices to persons for use under the U.S. Nuclear Regulatory Commission general license in Section 31.5 of 10 CFR Part 31; or

2. Report to the responsible state agency all transfers of devices manufactured and distributed for use under a general license in that state's regulations equivalent to 902 KAR 100:050, Section 3.

3. Such reports shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the agency and the general licensee, the type and model of the device transferred, and the quantity and type of radioactive material contained in the device. If one (1) or more intermediate persons will temporarily possess the device at the intended place of use prior to its possession by the user, the report shall include identification of each intermediate person by name, address, contact, and relationship to the intended user. The report shall be submitted within thirty (30) days after the end of each calendar quarter in which such a device is transferred to the generally licensed person;

4. If no transfers have been made to U.S. Nuclear Regulatory Commission licensees during the reporting period, this information shall be reported to the U.S. Nuclear Regulatory Commission;

5. If no transfers have been made to general licensees within a particular state during the reporting period, this information shall be reported to the responsible state agency upon request of that agency; and

(e) Keep records showing the name, address, and the point of contact for each general licensee to which the licensee directly or through an intermediate person transfers radioactive material in devices for use pursuant to the general license or equivalent regulations of the U.S. Nuclear Regulatory Commission or an agreement state. The records shall show the date of each transfer, the radionuclide and the quantity of radioactivity in each device transferred, the identity of any intermediate person, and compliance with the report requirements.

Section 4. Special Requirements for the Manufacture, Assembly, or Repair of Luminous Safety Devices for Use in Aircraft. An application for a specific license to manufacture, assemble, or repair luminous safety devices containing tritium or promethium-147 for use in aircraft, for distribution to persons generally licensed under 902 KAR 100:050 will be approved if:

(1) The applicant satisfies the general requirements specified in 902 KAR 100:040; and

(2) The applicant satisfies the requirements of U.S. Nuclear Regulatory Commission 10 CFR Part 32, Sections 32.53, 32.54, 32.55, 32.56, and 32.101, or their equivalent.

Section 5. Special Requirements for License to Manufacture Calibration Sources Containing Americium-241, Plutonium or Radium-226 for Distribution to Persons Generally Licensed Under 902 KAR 100:050. An application for a specific license to manufacture calibration and reference sources containing americium-241, plutonium or radium-226 to persons generally licensed under 902 KAR 100:050 will be approved if:

(1) The applicant satisfies the general requirement of 902 KAR 100:040; and

(2) The applicant satisfies the requirements of U.S. Nuclear Regulatory Commission 10 CFR Part 32, Sections 32.57, 32.58, 32.59, and 32.102 and 10 CFR Part 70, Section 70.29, or their equivalent.

Section 6. Manufacture and Distribution of Radioactive Material for Medical Use Under a General License. An application for a specific license to distribute radioactive material for use by physicians under the general license of these regulations shall be approved if:

(1) The applicant satisfies the general requirements specified in 902 KAR 100:040;

(2) The applicant submits evidence that the radioactive material is to be manufactured, labeled and packaged in accordance with a new drug application which the Commissioner of Food and Drug Administration has approved, or in accordance with a license for a biologic product issued by the Secretary, U.S. Department of Health and Human Services; and

(3) The following statement, or a substantially similar statement, appears on the label affixed to the container or appears in the leaflet or brochure which accompanies the

package:

"This radioactive drug may be received, possessed and used only by physicians licensed to dispense drugs in the practice of medicine. Its receipt, possession, use and transfer are subject to the regulations and a general license or the equivalent of the United States Nuclear Regulatory Commission or of an agreement state.

(Name of Manufacturer)"

Section 7. Manufacture and Distribution of Radioactive Material for Certain In Vitro Clinical or Laboratory Testing Under a General License. Application for a specific license to manufacture or distribute radioactive material for use under the general license of these regulations will be approved if:

(1) The applicant satisfies the general requirements specified in 902 KAR 100:040;

(2) The radioactive material is to be prepared for distribution in prepackaged units of:

(a) Iodine-125 in units not exceeding ten (10) microcuries each.

(b) Iodine-131 in units not exceeding ten (10) microcuries each.

(c) Carbon-14 in units not exceeding ten (10) microcuries each.

(d) Hydrogen-3 (tritium) in units not exceeding fifty (50) microcuries each.

(e) Iron-59 in units not exceeding twenty (20) microcuries each.

(f) Selenium-75 in units not exceeding ten (10) microcuries each.

(g) Mock Iodine-125 in units not exceeding 0.05 microcurie of iodine-129 and 0.005 microcurie of americium-241 each.

(h) Cobalt-57 (tritium) in units not exceeding fifty (50) microcuries each.

(3) Each prepackaged unit bears a durable, clearly visible label:

(a) Identifying the radioactive contents as to chemical form and radionuclide, and indicating that the amount of radioactivity does not exceed ten (10) microcuries of iodine-131, iodine-125, selenium-75, cobalt-57, or carbon-14; fifty (50) microcuries of hydrogen-3 (tritium); twenty (20) microcuries of iron-59; or Mock Iodine-125 in units not exceeding 0.05 microcurie of iodine-129 and 0.005 microcurie of americium-241 each; and

(b) Displaying the radiation caution symbol and the words, "Caution, Radioactive Material," and "Not for Internal or External Use in Humans or Animals;"

(4) The following statement, or a substantially similar statement which contains the information called for in the following statement, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure which accompanies the package:

"This radioactive material may be received, acquired, possessed, and used only by physicians, veterinarians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use, and transfer are subject to the regulations and a general license or the equivalent of the United States Nuclear Commission or of an agreement state.

(Name of Manufacturer)"; and

(5) The label affixed to the unit, or the leaflet or brochure which accompanies the package, contains adequate information as to the precautions to be observed in handling and storing such radioactive material. In the case of the Mock iodine-125 reference or calibration source, the information accompanying the source shall also contain directions to the licensee regarding the waste disposal requirements set out in these regulations.

Section 8. Licensing the Manufacture and Distribution of Ice Detection Devices. An application for a specific license to manufacture and distribute ice detection devices to persons generally licensed will be approved if:

(1) The applicant satisfies the general requirements of 902 KAR 100:040; and

(2) The criteria of 10 CFR Part 32, Sections 32.61, 32.62, and 32.103 are met.

Section 9. Manufacture and Distribution of Radiopharmaceuticals Containing Radioactive Material for Medical Use Under Group Licenses. An application for a specific license to manufacture and distribute radiopharmaceuticals containing radioactive material for use by persons licensed for the uses listed in Group I, Group II, Group IV, or Group V in 902 KAR 100:075 will be approved if:

(1) The applicant satisfies the general requirements specified in 902 KAR 100:040;

(2) The applicant submits evidence that:

(a) The radiopharmaceutical containing radioactive material will be manufactured, labeled, and packaged in accordance with the Federal Food, Drug and Cosmetic Act or the Public Health Service Act, such as a new drug application (NDA) approved by the Food and Drug Administration (FDA), or a "Notice of Claimed Investigational Exemption for a New Drug" (IND) that has been accepted by the FDA; or

(b) The manufacture and distribution of the radiopharmaceutical containing radioactive material is not subject to the Federal Food, Drug and Cosmetic Act and the Public Health Service Act;

(3) The applicant submits information on the radionuclide, chemical and physical form, packaging including maximum activity per package, and shielding provided by the packaging of the radioactive material which is appropriate for safe handling and storage of radiopharmaceuticals by group licensees; and

(4)(a) The label affixed to each package of the radiopharmaceutical contains information on the radionuclide, quantity, and date of assay and the label affixed to each package, or the leaflet or brochure which accompanies each package, contains a statement that the radiopharmaceutical is licensed by the cabinet for distribution to persons licensed pursuant to 902 KAR 100:051 and Group I, Group II, Group IV, and Group V of 902 KAR 100:075, as appropriate, or under equivalent licenses of the U.S. Nuclear Regulatory Commission or an agreement state.

(b) The labels, leaflets, or brochures required by this subsection are in addition to

the labeling required by the Food and Drug Administration (FDA) and they may be separate from or, with the approval of FDA, may be combined with the labeling required by FDA.

Section 10. Manufacture and Distribution of Generators or Reagent Kits for Preparation of Radiopharmaceuticals Containing Radioactive Material. An application for a specific license to manufacture and distribute generators or reagent kits containing radioactive material for preparation of radiopharmaceuticals by persons licensed pursuant to 902 KAR 100:051 for the uses listed in Group III of 902 KAR 100:075 will be approved if:

(1) The applicant satisfies the general requirements specified in 902 KAR 100:040;

(2) The applicant submits evidence that:

(a) The generator or reagent kit is to be manufactured, labeled and packaged in accordance with the Federal Food, Drug and Cosmetic Act or the Public Health Service Act, such as a new drug application (NDA) approved by the Food and Drug Administration (FDA), or a "Notice of Claimed Investigational Exemption for a New Drug" (IND) that has been accepted by the FDA; or

(b) The manufacture and distribution of the generator or reagent kit are not subject to the Federal Food, Drug and Cosmetic Act and the Public Health Service Act;

(3) The applicant submits information on the radionuclide, chemical and physical form, packaging including maximum activity per package, and shielding provided by the packaging of the radioactive material contained in the generator or reagent kit;

(4) The label affixed to the generator or reagent kit contains information on the radionuclide, quantity, and date of assay; and

(5) The label affixed to the generator or reagent kit, or the leaflet or brochure which accompanies the generator or reagent kit, contains:

(a) Adequate information, from a radiation safety standpoint, on the procedures to be followed and the equipment and shielding to be used in eluting the generator or processing radioactive material with the reagent kit; and

(b) A statement that this generator or reagent kit, as appropriate, is approved for use by persons licensed by the cabinet pursuant to 902 KAR 100:051 and Group III of 902 KAR 100:075 or under equivalent licenses of the U.S. Nuclear Regulatory Commission or an agreement state. The labels, leaflets, or brochures required by this section are in addition to the labeling required by the Food and Drug Administration (FDA) and they may be separate from or, with the approval of FDA, may be combined with the labeling required by FDA.

Section 11. Manufacture and Distribution of Sources or Devices Containing Radioactive Material for Medical Use. An application for a specific license to manufacture and distribute sources and devices containing radioactive material to persons licensed pursuant to 902 KAR 100:051 for use as a calibration or reference source or for medical uses will be approved if:

(1) The applicant satisfies the general requirements in 902 KAR 100:040;

(2) The applicant submits sufficient information regarding each type of source or device pertinent to an evaluation of its radiation safety, including:

(a) The radioactive material contained, its chemical and physical form, and amount;

(b) Details of design and construction of the source or device;

(c) Procedures for, and results of, prototype tests to demonstrate that the source or device will maintain its integrity under stresses likely to be encouraged in normal use and accidents;

(d) For devices containing radioactive material, the radiation profile of a prototype device;

(e) Details of quality control procedures to assure that production sources and devices meet the standards of the design and prototype tests;

(f) Procedures and standards for calibrating sources and devices;

(g) Legend and methods for labeling sources and devices as to their radioactive content; and

(h) Instructions for handling and storing the source or device from the radiation safety standpoint; these instructions are to be included on a durable label attached to the source or device or attached to a permanent storage container for the source or device; provided, that instructions which are too lengthy for such label may be summarized on the label and printed in detail on a brochure which is referenced on the label;

(3) The label affixed to the source or device, or to the permanent storage container for the source or device, contains information on the radionuclide, quantity, and date of assay, and a statement that the name of source or device is licensed by the cabinet for distribution to persons licensed pursuant to 902 KAR 100:051 or under equivalent licenses of the U.S. Nuclear Regulatory Commission or an agreement state, provided that such labeling for sources which do not require long term storage may be on a leaflet or brochure which accompanies the source;

(4) In the event the applicant desires that the source or device be required to be tested for leakage of radioactive material at intervals longer than six (6) months, he shall include in the application sufficient information to demonstrate that such longer interval is justified by performance characteristics of the source or device or similar sources or devices and by design features that have a significant bearing on the probability or consequence of leakage of radioactive material from the source; and

(5) In determining the acceptable interval for tests of leakage of radioactive material, the cabinet will consider information that includes, but is not limited to:

(a) Primary containment or source capsule;

(b) Protection of primary containment;

(c) Method of sealing containment;

(d) Containment construction materials;

(e) Form of contained radioactive material;

(f) Maximum temperature withstood during prototype tests;

(g) Maximum pressure withstood during prototype tests;

(h) Maximum quantity of contained radioactive material;

(i) Radiotoxicity of contained radioactive material; and

(j) Operating experience with identical sources or devices or similarly designed and constructed sources or devices.

Section 12. Requirements for License to

Manufacture and Distribute Industrial Products Containing Depleted Uranium for Mass-Volume Applications.

(1) An application for a specific license to manufacture industrial products and devices containing depleted uranium for use pursuant to 902 KAR 100:050 or equivalent regulations of the U.S. Nuclear Regulatory Commission or an agreement state will be approved if:

(a) The applicant satisfies the general requirements specified in 902 KAR 100:040;

(b) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control procedures, labeling or marking, proposed uses, and potential hazards of the industrial product or device to provide reasonable assurance that possession, use, or transfer of the depleted uranium in the product or device is not likely to cause any individual to receive in any period of one (1) calendar quarter a radiation dose in excess of ten (10) percent of the limits specified in 902 KAR 100:020; and

(c) The applicant submits sufficient information regarding the industrial product or device and the presence of depleted uranium for a mass-volume application in the product or device to provide reasonable assurance that unique benefits will accrue to the public because of the usefulness of the product or device.

(2) In the case of an industrial product or device whose unique benefits are questionable, the cabinet will approve an application for a specific license under this section only if the product or device is found to combine a high degree of utility and low probability of uncontrolled disposal and dispersal of significant quantities of depleted uranium into the environment.

(3) The cabinet may deny any application for a specific license under this section if the end use(s) of the industrial product or device cannot be reasonably foreseen.

(4) Each person licensed pursuant to this section shall:

(a) Maintain the level of quality control required by the license in the manufacture of the industrial product or device and in the installation of the depleted uranium into the product or device;

(b) Label or mark each unit to:

1. Identify the manufacturer of the product or device and the number of the license under which the product or device was manufactured, the fact that the product or device contains depleted uranium, and the quantity of depleted uranium in each product or device; and

2. State that the receipt, possession, use, and transfer of the product or device are subject to a general license, or the equivalent, and the regulations of the U.S. Nuclear Regulatory Commission or an agreement state;

(c) Assure that the depleted uranium before being installed in each product or device has been impressed with the following legend clearly legible through any plating or other covering: "Depleted Uranium;"

(d) Furnish the following:

1. A copy of the general license contained in 902 KAR 100:050 to each person to whom depleted uranium is transferred in a product or device for use pursuant to the general license contained in 902 KAR 100:050; or

2. A copy of the general license contained in the U.S. Nuclear Regulatory Commission's or agreement state's regulation equivalent to 902 KAR 100:050 and a copy of any applicable U.S. Nuclear Regulatory Commission's or agreement state's certificate, to each person to whom depleted uranium is transferred in a product or device for use pursuant to the general license of the U.S. Nuclear Regulatory Commission or an agreement state, with a note explaining that use of the product or device is regulated by the U.S. Nuclear Regulatory Commission or an agreement state under requirements substantially the same as those in 902 KAR 100:050;

(e) Report to the cabinet all transfers of industrial products or devices to persons for use under the general license in 902 KAR 100:050. Such report shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the cabinet and the general licensee, the type and model number of device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within thirty (30) days after the end of each calendar quarter in which such a product or device is transferred to the generally licensed person. If no transfers have been made to persons generally licensed under 902 KAR 100:050 during the reporting period, the report shall so indicate;

(f) Furnish the following:

1. A report to the U.S. Nuclear Regulatory Commission of all transfers of industrial products or devices to persons for use under the U.S. Nuclear Regulatory Commission general license in 10 CFR Part 40.25;

2. A report to the responsible agreement state agency all transfers of devices manufactured and distributed pursuant to this section for use under a general license in that state's regulations equivalent to 902 KAR 100:050;

3. Reports identifying each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the agency and the general licensee, the type and model number of the device transferred, and the quantity of depleted uranium contained in the product or device. Reports shall be submitted within thirty (30) days after the end of each calendar quarter in which such person or device is transferred to the generally licensed person.

4. A report, upon the request of the responsible agency, that no transfers have been made to a general licensee of that agency; and

(g) Keep records showing the name, address, and point of contact for each general licensee to whom he transfers depleted uranium in industrial products or devices for use pursuant to the general license provided in 902 KAR 100:050 or equivalent regulations of the U.S. Nuclear Regulatory Commission or an agreement state. The records shall be maintained for a period of two (2) years and shall show the date of each transfer, the quantity of depleted uranium in each product or device transferred, and compliance with the report requirements of this section.

Section 13. Licensing the Distribution of Naturally Occurring and Accelerator Produced Radioactive Material (NARM) in Example Quantities. (1) An application for a specific license to distribute NARM to persons exempted from these regulations pursuant to 902 KAR

100:045 will be approved if:

(a) The radioactive material is not contained in any food, beverage, cosmetic, drug, or other commodity designed for ingestion or inhalation by, or application to, a human being;

(b) The radioactive material is in the form of processed chemical elements, compounds, or mixtures, tissue samples, bioassay samples, counting standards, plated or encapsulated sources, or similar substances, identified as radioactive and to be used for its radioactive properties, but is not incorporated into any manufactured or assembled commodity, product, or device intended for commercial distribution; and

(c) The applicant submits copies of prototype labels and brochures and the cabinet approves such labels and brochures.

(2) The license issued under this section is subject to the following conditions:

(a) No more than ten (10) exempt quantities shall be sold or transferred in any single transaction. However, an exempt quantity may be composed of fractional parts of one (1) or more of the exempt quantity provided the sum of the fractions shall not excess unity.

(b) Each exempt quantity shall be separately and individually packaged. No more than ten (10) such packaged exempt quantities shall be contained in any outer package for transfer to persons exempt pursuant to 902 KAR 100:045. The outer package shall be such that the dose rate at the external surface of the package does not exceed 0.5 millirem per hour.

(c) The immediate container of each quantity or separately packaged fractional quantity of radioactive material shall bear a durable, legible label which:

1. Identifies the radionuclide and the quantity of radioactivity; and

2. Bears the words "Radioactive Material."

(d) In addition to the labeling information required by this subsection, the label affixed to the immediate container, or an accompanying brochure, shall:

1. State that the contents are exempt from licensing agency requirements;

2. Bear the words "Radioactive Material - Not for Human Use - Introduction into Foods, Beverages, Cosmetics, Drugs, or Medicinals, or into Products Manufactured for Commercial Distribution is Prohibited - Exempt Quantities Should Not Be Combined;" and

3. Set forth appropriate additional radiation safety precautions and instructions relating to the handling, use, storage, and disposal of the radioactive material.

(3) Each person licensed under this section shall maintain records identifying, by name and address, each person to whom radioactive material is transferred for use under 902 KAR 100:045 or the equivalent regulations of a licensing agency, and stating the kinds and quantities of radioactive material transferred. An annual summary report stating the total quantity of each radionuclide transferred under the specific license shall be filed with the cabinet. Each report shall cover the year ending June 30, and shall be filed within thirty (30) days thereafter. If no transfers of radioactive material have been made pursuant to this section during the reporting period, the report shall so indicate.

Section 14. Licensing the Incorporation of Naturally Occurring and Accelerator Produced Radioactive Material (NARM) into Gas and Aerosol Detectors. An application for a specific license authorizing the incorporation of NARM into gas and aerosol detectors to be distributed to persons exempt under 902 KAR 100:045 will be approved if the application satisfies requirements equivalent to those contained in 10 CFR Part 32.26. The maximum quantity of radium-226 in each device shall not exceed 0.1 microcurie.

Section 15. 902 KAR 100:057, In vitro and general medical license, is hereby repealed.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

CABINET FOR HUMAN RESOURCES
Department for Health Services
(Proposed Amendment)

902 KAR 100:060. Leak testing.

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and to regulate the handling and disposal of radioactive waste. The purpose of this regulation is to provide requirements and procedures for the testing of sealed radioactive sources for leakage and contamination.

Section 1. Applicability. This regulation establishes leak testing procedures for sealed sources licensed under these regulations.

Section 2. Tests for Leakage and Contamination of Sealed Sources. (1) Requirements. Each licensee possessing or using sealed sources of radioactive material, [nickel 63] foil sources, or plated alpha sources shall have such sources periodically tested for leakage and contamination as prescribed in this section. Records of these tests shall be maintained and made available for inspection by the cabinet.

(2) Method of testing. Tests for leakage and contamination shall be performed only by persons specifically authorized to perform such tests by the cabinet, [another agreement state, or the] United States Nuclear Regulatory Commission, or an agreement state. The test sample shall be taken from the surface of the source or from the surface of the device in which the source is stored or mounted and on which one might expect contamination to accumulate. The test sample shall be analyzed for radioactive contamination and the test [analysis] shall be capable of detecting the presence of 0.005 microcurie of radioactivity on the test sample. The results of the test shall be kept in units of microcuries and maintained for five (5) years unless otherwise specified by these regulations or license conditions [inspection by the cabinet].

(3) Interval of testing. Each sealed source of radioactive material or [nickel 63] foil source shall be tested for leakage and contamination at intervals not to exceed six (6) months and [except that] each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed three (3) months. In the absence of a certificate from a transferor indicating that a test has been made prior to the transfer, the sealed source shall not be put into use until tested. Notwithstanding the leak test intervals specified herein, the cabinet may authorize extended leak test intervals for specific sources used in certain specific applications.

(4) Leaking or contaminated sources. If the leak test reveals the presence of 0.005 microcurie or more of removable [leakage or] contamination [obtained from a teletherapy or a gamma irradiator source or from any other type source], the licensee shall immediately withdraw the source from use and shall cause it to be decontaminated, repaired, or disposed of in accordance with the cabinet's radiation regulations. All equipment which has been in contact with the leaking source shall be checked for contamination and decontaminated as specified by the cabinet. A report within five (5) days of the test describing the equipment involved, the test results and the corrective actions taken shall be filed with: Manager, Radiation Control [Branch], Kentucky Cabinet for Human Resources, 275 East Main Street, Frankfort, Kentucky 40621.

(5) Exemptions. Notwithstanding the requirements of this section, the following sources are exempted from periodic leak testing:

(a) Hydrogen-3 sources;

(b) Sources of radioactive material with a half-life of thirty (30) days or less;

(c) Sealed sources of radioactive material in gaseous form;

(d) Sources of beta or gamma emitting radioactive material with an activity of 100 microcuries or less;

(e) Sources of alpha emitting radioactive material with an activity of ten (10) microcuries or less;

(f) Nickel-63 foil sources of 100 microcuries or less; and

(g) Plated alpha sources, other than Californium-252 sources, with an activity of one-tenth (0.1) microcurie or less.

C HERNANDEZ, M.D., M.P.H.
E. AUSTIN, JR. Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing. R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs (note any effects upon competition): NA
(b) Reporting and paperwork requirements: None required
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs: NA
(b) Reporting and paperwork requirements: None required
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United

States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: NA
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: NA
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 100:065. Reciprocal recognition.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.842
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and [to regulate] the handling and disposal of radioactive waste. The purpose of this regulation is to provide for the reciprocal recognition of radioactive material licenses issued by the United States Nuclear Regulatory Commission or another agreement state.

Section 1. Applicability. The provisions of this regulation apply to all persons who possess, use or transfer radioactive material in Kentucky as authorized in a license issued by the United States Nuclear Regulatory Commission or another agreement state.

Section 2. Reciprocal Recognition of Licenses. (1) Subject to these regulations, any person who holds a specific license from the United States Nuclear Regulatory Commission or any agreement state, and issued by the agency [cabinet] having jurisdiction where the licensee maintains an office for directing the licensed activity and at which radiation safety records are normally maintained, is hereby granted a general license to conduct the activities authorized in such licensing document within this state for a period of 180 days in any calendar year provided that:
(a) The licensing document does not limit the activity authorized by such a document to specified installations or locations; [and]
(b) The out-of-state licensee notifies the cabinet in writing at least three (3) [two (2)] days prior to engaging in such activity. Such notification shall indicate the date of arrival, the duration of use, nature and scope of the use, the company where the radioactive material is to be used, the person in charge, the exact location and type of proposed possession within this state, and shall be accompanied by a copy of the pertinent licensing document. If, for a specific case, the three (3) [two (2)] day period would impose an undue hardship on the out-of-state licensee, the licensee [he] may, upon application to the cabinet, obtain permission to proceed sooner. The cabinet may waive the requirement for filing additional written notifications during the remainder of the calendar year following the receipt of the initial notification from a person engaging in activities under the general license provided in this section; [and]
(c) The out-of-state licensee complies with all applicable regulations of the cabinet and with all the terms and conditions of his licensing document, except any such terms and conditions which may be inconsistent with applicable regulations of the cabinet; [and]
(d) Provided further that [than] the cabinet may require the out-of-state licensee to supply such other information as the cabinet may reasonably request; [and]
(e) The licensee does not establish a permanent office in this state; and
(f) The out-of-state licensee shall not transfer or dispose of radioactive material possessed or used under the general license provided in this section except by transfer to a person:
1. Specifically licensed by the cabinet or by the United States Nuclear Regulatory Commission to receive such material; or
2. Exempt from the requirements for a license for such material under these regulations.
(2) Notwithstanding the provisions of subsection (1) of this section any person who holds a specific license or equivalent licensing document issued by the United States Nuclear Regulatory Commission or an agreement state authorizing the holder to manufacture, transfer, install or service a device described in 902 KAR 100:050, Section 3(3)(a), relating to the general licensing of certain uses of radioactive material and specific devices containing radioactive material within areas subject to the jurisdiction of the licensing body is hereby granted a general license to install, transfer, demonstrate or [and] service such a device in this state provided that:
(a) Such person shall satisfy the requirements of these regulations;
(b) The device has been manufactured, labeled, installed and serviced in accordance with applicable provisions of the specified license issued to such person by the United States Nuclear Regulatory Commission or an agreement state;
(c) Such person shall assure that any labels required to be affixed to the device under regulations of the authority which licensed manufacture of the device bear a statement that "removal of this label is prohibited;"
(d) The holder of the specific license shall furnish to each general licensee to whom he transfers such device or on whose premises he installs such device a copy of the general license contained in 902 KAR 100:050, Section 3(3), relating to the general licensing of certain uses of radioactive materials and specific devices containing radioactive material; and
(e) Such person shall file a report with the cabinet within thirty (30) days after the end of each calendar quarter in which any device is transferred to a person or installed in a location within the jurisdiction of the cabinet. Each report shall identify each general licensee to whom such a device is transferred by name and address, the type of device transferred, and the quantity and type of radioactive material contained in the device.
(3) The cabinet may withdraw, limit, or qualify its acceptance of any specific license or equivalent licensing document issued by another agency, or any product distributed

pursuant to such licensing document, upon determining that such action is necessary in order to prevent undue hazard to public health and safety [protect health or minimize danger to life] and property.

C HERNANDEZ, M.D., M.P.H.
E. AUSTIN, JR. Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing. R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs (note any effects upon competition): NA
(b) Reporting and paperwork requirements: None required
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs: NA
(b) Reporting and paperwork requirements: None required
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: NA
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: NA
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 100:070. [Intrastate] Transportation of radioactive material.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and [to regulate] the handling and disposal of radioactive waste. The purpose of this regulation is to provide requirements for the [intrastate] transportation of radioactive material.

Section 1. Applicability. The provisions of this regulation apply to all persons who transport or deliver radioactive material in Kentucky.

Section 2. [Intrastate] Transportation of Radioactive Material. No person shall deliver radioactive material to a carrier for transport or transport radioactive material except as authorized in a general or specific license issued by the cabinet or as exempted in Section 3 of this regulation. [(1) The provisions of this section apply to transportation of radioactive material, or the delivery of radioactive material to a carrier for transportation, which is not subject to the rules and regulations of the United States Department of Transportation and other agencies of the United States having jurisdiction.]

[(2) No licensee shall transport any radioactive material outside of the confines of his plant or other authorized location of use, or deliver any radioactive material to a carrier for transportation unless the licensee complies with the applicable requirements of the regulations, appropriate to the mode of transport, of the United States Department of Transportation in 49 CFR Parts 170-189, 14 CFR Part 103, and 46 CFR Part 146 and the United States Postal Service in 39 CFR Parts 14 and 15 insofar as such regulations relate to the packaging of radioactive material, marking and labeling of packages, loading and storage of packages, placarding of the transporting vehicle, monitoring requirements and accident reporting.]

[(3) The licensing or transporting agent shall permit inspection for compliance with the requirements under subsection (2) of this section by authorized personnel of regulatory agencies.]

[(4) The licensee shall establish procedures for opening and closing packages in which radioactive material is transported to provide safety and to assure that, prior to the delivery to a carrier for transport, each package is properly closed for transport.]

[(5) Prior to delivery of a package to a carrier for transport, the licensee shall assure that any special instructions needed to safely open the package are sent to, or have been made available to, the consignee.]

[(6) A general license is hereby issued to any common or contract carrier to transport and store radioactive material in the regular course of their carriage for another or storage incident thereto, provided the transportation and storage is in accordance with the applicable requirements of the regulations, appropriate to the mode of transport, of the U. S. Department of Transportation insofar as such regulations relate to the loading and storage of packages, placarding of the transporting vehicle, and incident reporting. Persons who transport and store radioactive material pursuant to the

general license in this paragraph are exempt from the requirements of 902 KAR 100:020 and 902 KAR 100:165.]

[(7) A general license is hereby issued to any private carrier to transport radioactive material, provided the transportation is in accordance with the applicable requirements of the regulations, appropriate to the mode of transport, of the U. S. Department of Transportation insofar as such regulations relate to the loading and storage of packages, placarding of the transporting vehicle, and incident reporting.]

[(a) Persons who transport radioactive material pursuant to the general license in this subsection are exempt from the requirements of 902 KAR 100:020 and 902 KAR 100:165 to the extent that they transport radioactive material.]

[(b) Physicians are exempt from the requirements of this subsection to the extent that they transport radioactive materials for use in the practice of medicine.]

Section 3. Exemptions. (1) Common and contract carriers, freight forwarders, and warehousemen who are subject to the requirements of the U.S. Department of Transportation in 49 CFR 170 through 189 or the U.S. Postal Service in the Postal Service Manual (Domestic Mail Manual), Section 124.3 incorporated by reference, 39 CFR 111.11(1974), are exempt from these regulations to the extent that they transport or store radioactive material in the regular course of their carriage for another or storage incident thereto. Common and contract carriers who are not subject to the requirements of the U.S. Department of Transportation or U.S. Postal Service are subject to Section 2 of this regulation and other applicable sections of these regulations.

(2) Any licensee is exempt from Section 2 of this regulation to the extent that he delivers to a carrier for transport a package containing radioactive material having a specific activity not greater than 0.002 microcurie per gram.

(3) A licensee is exempt from all requirements of this regulation, other than Sections 4 and 13 of this regulation, with respect to shipment or carriage of the following:

(a) Packages containing no more than Type A quantities of radioactive material if the package contains no fissile material; or

(b) Packages transported between locations within the United States which contain only americium or plutonium in special form with an aggregate radioactivity not to exceed twenty (20) curies.

Section 4. Transportation of Licensed Material. (1) Each licensee who transports licensed material outside of the confines of his plant or other place of use, or who delivers licensed material to a carrier for transport shall:

(a) Comply with the applicable requirements, appropriate to the mode of transport, of the regulations of the U.S. Department of Transportation;

(b) Assure that any special instructions needed to safely open the package are sent to or have been made available to the consignee.

(2) If, for any reason, the regulations of the U.S. Department of Transportation are not applicable to a shipment of licensed material, the licensee shall conform to the standards and requirements of those regulations to the same extent as if the shipment was subject to the regulations.

Section 5. General Licenses for Carriers. (1) A general license is hereby issued to any common or contract carrier not exempt under Section 3 of this regulation to receive, possess, transport, and store radioactive material in the regular course of their carriers for another or storage incident thereto, provided the transportation and storage is in accordance with the applicable requirements, appropriate to the mode of transport, of the U.S. Department of Transportation insofar as such requirements relate to the loading and storage of packages, placarding of the transporting vehicle, and incident reporting.

(2) A general license is hereby issued to any private carrier to transport radioactive material, provided the transportation is in accordance with the applicable requirements, appropriate to the mode of transport, of the U.S. Department of Transportation insofar as such requirements relate to the loading and storage of packages, placarding of the transporting vehicle, and incident reporting.

(3) Any notification of incidents referred to in those U.S. Department of Transportation requirements shall be filed with, or made to, the cabinet.

(4) Persons who transport radioactive material pursuant to the general licenses in this section are exempt from the requirements of 902 KAR 100:020 and 902 KAR 100:165 of these regulations to the extent that they transport radioactive material.

Section 6. General License: NRC Approved Packages. (1) A general license is hereby issued to any licensee of the cabinet to transport, or to deliver to a carrier for transport, licensed material in a package for which a license, certificate of compliance, or other approval has been issued by the U.S. Nuclear Regulatory Commission (NRC).

(2) This general license applies only to a licensee who:

(a) Has a copy of the specific license, certificate of compliance, or other approval of the package and has the drawings and other documents referenced in the approval relating to the use and maintenance of the packaging and to the actions to be taken prior to shipment;

(b) Complies with the terms and conditions of the license, certificate, or other approval, as applicable, and the applicable requirements of this regulation;

(c) Prior to the licensee's first use of the package, has registered with the U.S. Nuclear Regulatory Commission; and

(d) Has a quality assurance program, as required by Section 19 of this regulation, approved by the cabinet.

(3) The general license in subsection (1) of this section applies only when the package approval authorizes use of the package under this general license.

(4) For previously approved Type B packages which are not designated as either B(U) or B(M) in the NRC Certificate of Compliance, this general license is subject to additional restrictions of Section 7 of this regulation.

Section 7. Previously Approved Type B

Packages. (1) A Type B package previously approved by the NRC, but not designated as B(U) or B(M) in the NRC Certificate of Compliance, may be used under the general license of Section 6 of this regulation with the following additional limitations:

(a) Fabrication of the packaging was satisfactorily completed before August 31, 1986, as demonstrated by application of its model number in accordance with U.S. NRC Regulations; and

(b) The package may not be used for a shipment to a location outside the United States after August 31, 1986, except under special arrangement approved by the U.S. Department of Transportation in accordance with 49 CFR 173.471.

Section 8. General License: DOT Specification Container. (1) A general license is issued to any licensee of the cabinet to transport or to deliver to a carrier for transport licensed material in a specification container for a Type B quantity of radioactive material as specified in the regulations of the U.S. DOT in 49 CFR Parts 173 and 178.

(2) This general license applies only to a licensee who has a quality assurance program approved by the cabinet as satisfying the provisions of Section 19 of this regulation.

(3) This general license applies only to a licensee who:

(a) Has a copy of the specification; and

(b) Complies with the terms and conditions of the specification and the applicable requirements of this regulation.

(4) The general license in subsection (1) of this section is subject to the limitation that the specification container may not be used for a shipment to a location outside the United States after August 31, 1986 except under special arrangements approved by U.S. DOT in accordance with 49 CFR 173.472.

Section 9. General License: Use of Foreign Approved Package. (1) A general license is issued to any licensee of the cabinet to transport or to deliver to a carrier for transport licensed material in a package the design of which has been approved in a foreign national competent authority certificate which has been revalidated by the U.S. DOT as meeting the applicable requirements of 49 CFR 171.12.

(2) This general license applies only to shipments made to or from locations outside the United States.

(3) This general license applies to a licensee who:

(a) Has a copy of the applicable certificate, the revalidation, and the drawings and other documents referenced in the certificate relating to the use and maintenance of the packaging and to the actions to be taken prior to shipment; and

(b) Complies with the terms and conditions of the certificate and revalidation and with the applicable requirements of this regulation.

Section 10. General License: Type A, Fissile Class II Packages. (1) A general license is hereby issued to any licensee to transport fissile material, or to deliver fissile material to a carrier for transport, if the material is shipped as a Fissile Class II package.

(2) This general license applies only when a package contains no more than a Type A quantity of radioactive material, including only one (1) of the following:

(a) Up to forty (40) grams of uranium-235; or

(b) Up to thirty (30) grams of uranium-233; or

(c) Up to twenty-five (25) grams of the fissile radionuclides of plutonium, except that for encapsulated plutonium-beryllium neutron sources in special form, an $A_1$ quantity of plutonium may be present; or

(d) A combination of fissile radionuclides in which the sum of the ratios of the amount of each radionuclide to the corresponding maximum amounts in this subsection does not exceed unity.

(3) This general license applies only when, except as specified below for encapsulated plutonium-beryllium sources, a package containing more than fifteen (15) grams of fissile radionuclides is labeled with a transport index not less than the number given by the following equation, where the package contains x grams of uranium-235, y grams of uranium-233, and z grams of the fissile radionuclides of plutonium:

$$\text{minimum transport index} = (0.4x+0.67y+z)\left(\frac{1}{x+y+z} - \frac{1}{15}\right)$$

For a package in which the only fissile material is in the form of encapsulated plutonium-beryllium neutron sources in special form, the transport index based on criticality considerations may be taken as 0.026 times the number of grams of the fissile radionuclides of plutonium in excess of fifteen (15) grams. In all cases, the transport index must be rounded up to one (1) decimal place, and may not exceed ten (10).

Section 11. General License: Restricted, Fissile Class II Package. (1) A general license is hereby issued to any licensee to transport fissile material, or to deliver fissile material to a carrier for transport, if the material is shipped as a Fissile Class II package.

(2) This general license applies only when:

(a) The package contains no more than a Type A quantity of radioactive material;

(b) Neither beryllium nor hydrogenous material enriched in deuterium is present;

(c) The total mass of graphite present does not exceed 150 times the total mass of uranium-235 plus plutonium;

(d) Substances having a higher hydrogen density than water, (e.g. certain hydrocarbon oils, are not present, except that polyethylene may be used for packing or wrapping);

(e) Uranium-233 is not present, and the amount of plutonium does not exceed one (1) percent of the amount of uranium-235; and

(f) The amount of uranium-235 is limited as follows:

1. If the fissile radionuclides are not uniformly distributed, the maximum amount of uranium-235 per package may not exceed the value given in the following table:

Table I

| Uranium enrichment in weight percent of uranium-235 not exceeding | Permissible maximum grams of uranium-235 per package |
|---|---|
| 24 | 40 |
| 20 | 42 |
| 15 | 45 |
| 11 | 48 |
| 10 | 51 |
| 9.5 | 52 |
| 9 | 54 |
| 8.5 | 55 |
| 8 | 57 |
| 7.5 | 59 |
| 7 | 60 |
| 6.5 | 62 |
| 6 | 65 |
| 5.5 | 68 |
| 5 | 72 |
| 4.5 | 76 |
| 4 | 80 |
| 3.5 | 88 |
| 3 | 100 |
| 2.5 | 120 |
| 2 | 164 |
| 1.5 | 272 |
| 1.35 | 320 |
| 1 | 680* |
| 0.92 | 1200* |

* Pursuant to its agreement with the U.S. Nuclear Regulatory Commission, the cabinet jurisdiction extends only to 350 grams of uranium-235.

2. If the fissile radionuclides are distributed uniformly (i.e., cannot form a lattice arrangement within the packaging) the maximum amount of uranium-235 per package may not exceed the value given in the following table:

Table II

| Uranium enrichment in weight percent of uranium-235 not exceeding | Permissible maximum grams of uranium-235 per package |
|---|---|
| 4 | 84 |
| 3.5 | 92 |
| 3 | 112 |
| 2.5 | 148 |
| 2 | 240 |
| 1.5 | 569* |
| 1.35 | 800* |

* Pursuant to its agreement with the U.S. Nuclear Regulatory Commission, the cabinet jurisdiction extends only to 350 grams of uranium-235.

(g) The transport index of each package based on criticality considerations is taken as ten (10) times the number of grams of uranium-235 in the package divided by the maximum allowable number of grams per package in accordance with Table I or II above as applicable.

Section 12. Fissile Material; Assumptions as to Unknown Properties. When the isotopic abundance, mass, concentration, degree of irradiation, degree of moderation, or other pertinent property of fissile material in any package is not known, the licensee shall package the fissile material as if the unknown properties have credible values that will cause the maximum nuclear reactivity.

Section 13. Preliminary Determinations. Prior to the first use of any packaging for the shipment of radioactive material:

(1) The licensee shall ascertain that there are no defects which could significantly reduce the effectiveness of the packaging;

(2) Where the maximum normal operating pressure will exceed 34.3 kilopascal (5 psi) gauge, the licensee shall test the containment system at an internal pressure at least fifty (50) percent higher than the maximum normal operating pressure to verify the capability of that system to maintain its structural integrity at that pressure.

(3) The licensee shall conspicuously and durably mark the packaging with its model number, gross weight, and a package identification number assigned by the U.S. Nuclear Regulatory Commission. Prior to applying the model number, the licensee shall determine that the packaging has been fabricated in accordance with the design approved by the U.S. Nuclear Regulatory Commission.

Section 14. Routine Determinations. Prior to each shipment of licensed material, the licensee shall ensure that the package with its contents satisfies the applicable requirements of this regulation and of the license. The licensee shall determine that:

(1) The package is proper for the contents to be shipped;

(2) The package is in unimpaired physical condition except for superficial defects such as marks or dents;

(3) Each closure device of the packaging, including any required gasket, is properly installed and secured and free of defects;

(4) Any system for containing liquid is adequately sealed and has adequate space or other specified provision for expansion of the liquid;

(5) Any pressure relief device is operable and set in accordance with written procedures;

(6) The package has been loaded and closed in accordance with written procedures;

(7) Any structural part of the package which could be used to lift or tie down the package during transport is rendered inoperable for that purpose unless it satisfies design requirements specified by the U.S. Nuclear Regulatory Commission.

(8)(a) The level of non-fixed (removable) radioactive contamination on the external surfaces of each package offered for shipment is as low as reasonably achievable. The level of non-fixed radioactive contamination may be determined by wiping an area of 300 square centimeters of the surface concerned with an absorbent material, using moderate pressure, and measuring the activity on the wiping material. Sufficient measurements must be taken in the most appropriate locations to yield a representative assessment of the non-fixed contamination levels. Except as provided under paragraph (b) of this subsection, the amount of radioactivity measured on any single wiping material when averaged over the surface wiped, must not exceed the limits given in Table III of this subsection at any time during transport.

Other methods of assessment of equal or greater efficiency may be used. When other methods are use, the detection efficiency of the method used must be taken into account and in no case may the non-fixed contamination on the external surfaces of the package exceed ten (10) times the limits listed in Table III of this subsection.

Table III
REMOVABLE EXTERNAL RADIOACTIVE
CONTAMINATION WIPE LIMITS

| Contaminent | Maximum Permissible Limits uCi/cm² | dpm/cm² |
|---|---|---|
| Beta-gamma emitting radionuclides: all radionuclides with half-lives less than ten (10) days; natural uranium; natural thorium; uranium-235; uranium-238; thorium-228; thorium-230 and thorium-232 when contained in ores or physical concentrates | $10^{-5}$ | 22 |
| All other alpha emitting radionuclides | $10^{-6}$ | 2.2 |

(b) In the case of packages transported as exclusive use shipments by rail or highway only, the non-fixed radioactive contamination at any time during transport must not exceed ten (10) times the levels prescribed in paragraph (a) of this subsection. The levels at the beginning of transport must not exceed the levels prescribed in paragraph (a) of this subsection.

(9) External radiation levels around the package and around the vehicle, if applicable, will not exceed 200 millirem per hour at any point in the external surface of the package at any time during transportation. The transport index shall not exceed ten (10).

(10) For a package transported as exclusive use by rail, highway or water, radiation levels external to the package may exceed the limits specified in subsection (9) of this section but must not exceed any of the following:

(a) 200 millirem/hour on the accessible external surface of the package unless the following conditions are met, in which case the limit is 1000 millirem per hour.

1. The shipment is made in a closed transport vehicle;

2. Provisions are made to secure the package so that its position within the vehicle remains fixed during transportation; and

3. There are no loading or unloading operations between the beginning and end of the transportation;

(b) 200 millirem/hour at any point on the outer surface of the vehicle, including the upper and lower surfaces, or in the case of an open vehicle, at any point on the vertical planes projected from the outer edges of the vehicle, on the upper surface of the load, and on the lower external surface of the vehicle;

(c) Ten (10) millirem/hour at any point two (2) meters from the vertical planes represented by the outer lateral surfaces of the vehicle, or, in the case of an open vehicle, at any point two (2) meters from the vertical planes projected from the outer edges of the vehicle; and

(d) Two (2) millirem/hour in any normally occupied positions of the vehicle, except that this provision does not apply to private motor carriers when persons occupying these positions are provided with special health supervision, personnel radiation exposure monitoring devices, and training in accordance with 902 KAR 100:165, Section 3.

(11) A package must be prepared for transport so that in still air at 100°F (30°C) and in the shade, no accessible surface of a package would have a temperature exceeding 122°F (50°C) in a nonexclusive use shipment or 180°F (82°C) in an exclusive use shipment. Accessible package surface temperatures shall not exceed these limits at any time during transportation.

Section 15. Air Transport of Plutonium. Notwithstanding the provisions of any general licenses and notwithstanding any exemptions stated directly in this regulation or included indirectly by citation of U.S. Department of Transportation regulations, as may be applicable, the licensee shall assure that plutonium in any form is not transported by air or delivered to a carrier for air transport unless:

(1) The plutonium is contained in a medical device designed for individual human application;

(2) The plutonium is contained in a material in which the specific activity is not greater than 0.002 microcurie per gram of material and in which the radioactivity is essentially uniformly distributed;

(3) The plutonium is shipped in a single package containing no more than an $A_2$ quantity of plutonim in any isotope or form and is shipped in accordance with Section 4 of this regulation; or

(4) The plutonium is shipped in a package specifically authorized for the shipment of plutonium by air in the Certificate of Compliance for that package issued by the U.S. Nuclear Regulatory Commission.

Section 16. Records. (1) Each licensee shall maintain for a period of two (2) years after shipment a record of each shipment of licensed material not exempt under Section 3 of this regulation, showing, where applicable:

(a) Identification of the packaging by model number;

(b) Verification that there are no significant defects in the packaging, as shipped;

(c) Volume and identification or coolant;

(d) Type and quantity of licensed material in each package, and the total quantity of each shipment;

(e) Date of the shipment;

(f) Name and address of the transferee;

(g) Address to which the shipment was made; and

(h) Results of the determinations required by Section 12 of this regulation.

(2) The licensee shall make available to the cabinet for inspection, upon reasonable notice, all records required by this regulation.

Section 17. Reports. The licensee shall report to the cabinet within thirty (30) days:

(1) Any instance in which there is significant reduction in the effectiveness of any authorized packaging during use; and

(2) Details of any defects with safety significance in the packaging after first use, with the means employed to repair the defects and prevent their recurrence.

Section 18. Advance Notification of Transport of Nuclear Waste.

(1) Prior to the transport of any nuclear waste outside of the confines of the licensee's facility or other place of use or storage, or prior to the delivery of any nuclear waste to a carrier for transport, each licensee shall provide advance notification of such transport to the governor, or governor's designee, of each state through which the waste will be transported.

(2) Advance notification is required only when:

(a) The nuclear waste is required to be in Type B packaging for transportation;

(b) The nuclear waste is being transported to, through, or across state boundaries to a disposal site or to a collection point for transport to a disposal site;

(c) The quantity of licensed material in a single package exceeds:

1. 5,000 curies of special form radionuclides;

2. 5,000 curies of uncompressed gases of argon-41, krypton-85m, krypton-87, xenon-131m, or xenon-135;

3. 50,000 curies of argon-37, or of uncompressed gases of krypton-85 or xenon-133, or of hydrogen-3 as a gas, as luminous paint, or absorbed on solid material;

4. Twenty (20) curies of other non-special form radionuclides for which $A_2$ is less than or equal to four (4) curies; or

5. 200 curies of to the non-special form radionuclides for which $A_2$ is greater than four (4) curies.

(3) Each advance notification shall contain the following information:

(a) The name, address, and telephone number of the shipper, carrier, and receiver of the shipment;

(b) A description of the nuclear waste contained in the shipment as required by the regulations of the U.S. Department of Transportation, 49 CFR 172.202 and 172.203(d);

(c) The point of origin of the shipment and the seven (7) day period during which departure of the shipment is estimated to occur;

(d) The seven (7) day period during which arrival of the shipment at state boundaries is estimated to occur;

(e) The destination of the shipment, and the seven (7) day period during which arrival of the shipment is estimated to occur; and

(f) A point of contact with a telephone number for current shipment information.

(4) The notification shall be made in writing to the office of each appropriate governor or governor's designee and to the cabinet. A notification delivered by mail must be postmarked at least seven (7) days before the beginning of the seven (7) day period during which departure of the shipment is estimated to occur. A notification delivered by messenger must reach the office of the governor, or governor's designee, at least four (4) days before the beginning of the seven (7) day period during which departure of the shipment is estimated to occur. A copy of the notification shall be retained by the licensee for one (1) year.

(5) The licensee shall notify each appropriate governor, or governor's designee, and the cabinet of any changes to schedule information provided pursuant to subsection (1) of this section. Such notification shall be by telephone to a responsible individual in the office of the governor, or governor's designee, of the appropriate state or states. The licensee shall maintain for one (1) year a record of the name of the individual contacted.

(6) Each licensee who cancels a nuclear waste shipment, for which advance notification has been sent, shall send a cancellation notice to the governor, or governor's designee, of each appropriate state and to the cabinet. A copy of the notice shall be retained by the licensee for one (1) year.

Section 19. Quality Assurance Requirements.

(1) Each licensee shall establish, maintain, and execute a quality assurance program to verify, by procedures such as checking, auditing, and inspection, that deficiencies, deviations, and defective material and equipment relating to the shipment of packages containing radioactive materials, are promptly identified and corrected. Prior to the use of any package for the shipment of radioactive material, each licensee shall obtain cabinet approval of its quality assurance program.

(2) Each licensee shall document the quality assurance program by written procedures or instructions and shall carry out the program in accordance with those procedures throughout the period during which packaging is used. The licensee shall identify the material and components to be covered by the quality assurance program.

(3) The licensee shall maintain sufficient written records to demonstrate compliance with the quality assurance program. Records pertaining to the use of a package for shipment of radioactive material must be retained for a period of two (2) years after shipment.

Section 20. Determination of $A_1$ and $A_2$. The following procedures are to be followed to make a determination of $A_1$ and $A_2$ values:

(1) Single radionuclides:

(a) For a single radionuclide of known identity, the values of $A_1$ and $A_2$ are taken from Section 21 of this regulation if listed there. The values $A_1$ and $A_2$ in Section 21 of this regulation are also applicable for radionuclides contained in (a,n) or (γ,n) neutron sources.

(b) For any single radionuclide whose identity is known but which is not listed in Section 21 of this regulation, the values of $A_1$ and $A_2$ are determined according to the following procedure:

1. If the radionuclide emits only one (1) type of radiation, $A_1$ is determined according to the rules in subparagraphs of this paragraph. For radionuclides emitting different finds of radiation, $A_1$ is the most restrictive value of those determined for each kind of radiation. However, in both cases, $A_1$ is restricted to a maximum of 1000 curies. If a parent nuclide decays into a shorter lived daughter with a half-life not greater than ten (10) days, $A_1$ is calculated for both the parent and the daughter, and the more limiting of the two (2) values is assigned to the parent nuclide.

a. For gamma emitters, $A_1$ is determined by the expression:

$$A_1 = \frac{9 \text{ curies}}{r}$$

where r is the gamma-ray constant, corresponding to the dose in R/h at one (1) meter per curie; the number nine (9) results from the choice of one (1) rem/h at a distance of three (3) meters as the reference dose equivalent rate.

b. For x-ray emitters, $A_1$ is determined by the atomic number of the nuclide:

for z less than or equal to 55---$A_1$ = 1000Ci

for z less than 55---$A_1$ = 200Ci

where z is the atomic number of the nuclide.

c. For beta emitters, $A_1$ is determined by the maximum beta energy ($E_{max}$) according to Section 22 of this regulation;

d. For alpha emitters, $A_1$ is determined by the expression:

$$A_1 = 1000\ A_3$$

where $A_3$ is the value listed in Section 23 of this regulation.

2. $A_2$ is the more restrictive of the following two (2) values:

a. The corresponding $A_1$; and

b. The value $A_3$ obtained from Section 23 of this regulation.

(c) For any single radionuclide whose identity is unknown, the value of $A_1$ is taken to be two (2) curies and the value of $A_2$ is taken to be 0.002 curie. However, if the atomic number of the radionuclide is known to be less than 82, the value of $A_1$ is taken to be ten (10) curies and the value of $A_2$ is taken to be 0.4 curie.

(2) Mixtures of radionuclides, including radioactive decay chains:

(a) For mixed fission products the following activity limits may be assumed if a detailed analysis of the mixture is not carried out:

$$\frac{A_1}{A_2} = \frac{10 \text{ Ci}}{0.4 \text{ Ci}}$$

(b) A single radioactive decay chain is considered to be a single radionuclide when the radionuclides are present in their naturally occurring proportions and no daughter nuclide has a half-life either longer than ten (10) days or longer than that of the parent nuclide. The activity to be taken into account and the $A_1$ and $A_2$ values, radiation emitted by daughters must be considered. However, in the case of radioactive decay chains in which any daughter nuclide has a half-life either longer than ten (10) days or greater than that of the parent nuclide, the parent and daughter nuclides are considered to be mixtures of different nuclides.

(c) In the case of a mixture of difference radionuclides, where the identify and activity of each radionuclide are known, the permissible activity of each radionuclide $R_1$, $R_2 \ldots R_n$ is such that $F_1 + F_2 + \ldots F_n$ is greater than unity, where

$$F_1 = \frac{\text{Total activity of } R_1}{A_1(R_1)}$$

$$F_2 = \frac{\text{Total activity of } R_2}{A_1(R_2)}$$

$$F_n = \frac{\text{Total activity of } R_n}{A_1(R_n)}$$

$A_1$ ($R_1$, $R_2 .. R_n$) is the value of $A_1$ or $A_2$ as appropriate for the nuclide $R_1$, $R^2 \ldots R_n$.

(d) When the identity of each radionuclide is known but the individual activities of some of the radionuclides are not known, the formula given in paragraph (c) of this subsection is applied to establish the values of $A_1$ or $A_2$ as appropriate. All the radionuclides whose individual activities are not known (their total activity will, however, be known) are classed in a single group and the most restrictive value of $A_1$ and $A_2$ applicable to any one (1) is used as the value of $A_1$ or $A_2$ in the denominator of the fraction.

(e) Where the identity of each radionuclide is known but the individual activity of none of the radionuclides is known, the most restrictive value of $A_1$ or $A_2$ applicable to any one (1) of the radionuclides present is adopted as the applicable value.

(f) When the identity of none of the nuclides is known, the value of $A_1$ is taken to be two (2) curies and the value of $A_2$ is taken to be 0.002 curie. However, if alpha emitters are known to be absent, the value of $A_2$ is taken to be 0.4 curie.

Section 21. Table. The $A_1$ and $A_2$ values for radionuclides are as follows (see footnotes at end of table):

(See table on following pages)

**COMPILER'S NOTE: Due to the use of superscript and subscript, the tables on the following pages, which are new, are not underlined.**

| Symbol of radionuclide | Element and atomic number | $A_1$(Ci) | $A_2$(Ci) (Ci/g) | Specific Activity |
|---|---|---|---|---|
| $^{227}Ac$ | Actinum (89) | 1000 | 0.003 | $7.2 \times 10^{1}$ |
| $^{228}Ac$ | | 10 | 4 | $2.2 \times 10^{6}$ |
| $^{105}Ag$ | Silver (47) | 40 | 40 | $3.1 \times 10^{4}$ |
| $^{110m}Ag$ | | 7 | 7 | $4.7 \times 10^{3}$ |
| $^{111}Ag$ | | 100 | 20 | $1.6 \times 10^{5}$ |
| $^{241}Am$ | Americium (95) | 8 | 0.008 | 3.2 |
| $^{243}Am$ | | 8 | 0.008 | $1.9 \times 10^{-1}$ |
| $^{37}Ar$ (Compressed or uncompressed)* | Argon (18) | 1000 | 1000 | $1.0 \times 10^{-5}$ |
| $^{41}Ar$ (uncompressed)* | | 20 | 20 | $4.3 \times 10^{7}$ |
| $^{41}Ar$ (compressed)* | | 1 | 1 | $4.3 \times 10^{7}$ |
| $^{73}As$ | Arsenic (33) | 1000 | 400 | $2.4 \times 10^{4}$ |
| $^{74}As$ | | 20 | 20 | $1.0 \times 10^{5}$ |
| $^{76}As$ | | 10 | 10 | $1.6 \times 10^{6}$ |
| $^{77}As$ | | 300 | 20 | $1.1 \times 10^{6}$ |
| $^{211}At$ | Astatine (85) | 200 | 7 | $2.1 \times 10^{6}$ |
| $^{193}Au$ | Gold (79) | 200 | 200 | $9.3 \times 10^{5}$ |
| $^{196}Au$ | | 30 | 30 | $1.2 \times 10^{5}$ |
| $^{198}Au$ | | 40 | 20 | $2.5 \times 10^{5}$ |
| $^{199}Au$ | | 200 | 25 | $2.1 \times 10^{5}$ |
| $^{131}Ba$ | Barium (56) | 40 | 40 | $8.7 \times 10^{4}$ |
| $^{133}Ba$ | | 40 | 10 | $4.0 \times 10^{2}$ |
| $^{140}Ba$ | | 20 | 20 | $7.3 \times 10^{4}$ |
| $^{7}Be$ | Beryllium (4) | 300 | 300 | $3.5 \times 10^{5}$ |
| $^{206}Bi$ | Bismuth (83) | 5 | 5 | $9.9 \times 10^{4}$ |
| $^{207}Bi$ | | 10 | 25 | $2.2 \times 10^{2}$ |
| $^{210}Bi$(RaE) | | 100 | 4 | $1.2 \times 10^{5}$ |
| $^{212}Bi$ | | 6 | 6 | $1.5 \times 10^{7}$ |
| $^{249}Bk$ | Berkelium (97) | 1000 | 1 | $1.8 \times 10^{3}$ |
| $^{77}Br$ | Bromine (35) | 70 | 25 | $7.1 \times 10^{5}$ |
| $^{82}Br$ | | 6 | 6 | $1.1 \times 10^{6}$ |
| $^{11}C$ | Carbon (6) | 20 | 20 | $8.4 \times 10^{8}$ |
| $^{14}C$ | | 1000 | 60 | 4 x 6 |
| $^{45}Ca$ | Calcium (20) | 1000 | 25 | $1.9 \times 10^{4}$ |
| $^{47}Ca$ | | 20 | 20 | $5.9 \times 10^{5}$ |
| $^{109}Cd$ | Cadmium (48) | 1000 | 70 | $2.6 \times 10^{3}$ |
| $^{115m}Cd$ | | 30 | 30 | $2.6 \times 10^{4}$ |
| $^{115}Cd$ | | 80 | 20 | $5.1 \times 10^{5}$ |
| $^{139}Ce$ | Cerium (58) | 100 | 100 | $6.5 \times 10^{3}$ |
| $^{141}Ce$ | | 300 | 25 | $2.8 \times 10^{4}$ |
| $^{143}Ce$ | | 60 | 20 | $6.6 \times 10^{5}$ |
| $^{144}Ce$ | | 10 | 7 | $3.2 \times 10^{3}$ |
| $^{249}Cf$ | Californium (98) | 2 | 0.002 | 3 x 1 |
| $^{250}Cf$ | | 7 | 0.007 | $1.3 \times 10^{2}$ |
| $^{252}Cf$ | | 2 | 0.009 | $6.5 \times 10^{2}$ |
| $^{36}Cl$ | Chlorine (17) | 300 | 10 | $3.2 \times 10^{-2}$ |
| $^{38}Cl$ | | 10 | 10 | $1.3 \times 10^{8}$ |
| $^{242}Cm$ | Curium (96) | 200 | 0.2 | $3.3 \times 10^{3}$ |
| $^{243}Cm$ | | 9 | 0.009 | $4.2 \times 10^{1}$ |
| $^{244}Cm$ | | 10 | 0.01 | $8.2 \times 10^{1}$ |
| $^{245}Cm$ | | 6 | 0.006 | $1.0 \times 10^{-1}$ |
| $^{246}Cm$ | | 6 | 0.006 | $3.6 \times 10^{-1}$ |
| $^{56}Co$ | Cobalt (27) | 5 | 5 | $3.0 \times 10^{4}$ |
| $^{57}Co$ | | 90 | 90 | $8.5 \times 10^{3}$ |
| $^{58m}Co$ | | 1000 | 1000 | $5.9 \times 10^{6}$ |
| $^{58}Co$ | | 20 | 20 | $3.1 \times 10^{4}$ |
| $^{60}Co$ | | 7 | 7 | $1.1 \times 10^{3}$ |
| $^{51}Cr$ | Chromium (24) | 600 | 600 | $9.2 \times 10^{4}$ |
| $^{129}Cs$ | Cesium (55) | 40 | 40 | $7.6 \times 10^{5}$ |
| $^{131}Cs$ | | 1000 | 1000 | $1.0 \times 10^{5}$ |
| $^{134m}Cs$ | | 1000 | 10 | $7.4 \times 10^{6}$ |
| $^{134}Cs$ | | 10 | 10 | $1.2 \times 10^{3}$ |
| $^{135}Cs$ | | 1000 | 25 | $8.8 \times 10^{-4}$ |
| $^{136}Cs$ | | 7 | 7 | $7.4 \times 10^{4}$ |
| $^{137}Cs$ | | 30 | 10 | $9.8 \times 10^{1}$ |

| Symbol of radionuclide | Element and atomic number | $A_1$(Ci) | $A_2$(Ci) (Ci/g) | Specific Activity |
|---|---|---|---|---|
| $^{64}Cu$ | Copper (29) | 80 | 25 | $3.8 \times 10^{6}$ |
| $^{67}Cu$ | | 200 | 25 | $7.9 \times 10^{5}$ |
| $^{165m}Dy$ | Dysprosium (66) | 100 | 20 | $8.2 \times 10^{6}$ |
| $^{166}Dy$ | | 1000 | 200 | $2.3 \times 10^{5}$ |
| $^{169}Er$ | Erbium (68) | 1000 | 25 | $8.2 \times 10^{4}$ |
| $^{171}Er$ | | 50 | 20 | $2.4 \times 10^{6}$ |
| $^{152m}Eu$ | Europium (63) | 30 | 30 | $2.2 \times 10^{6}$ |
| $^{152}Eu$ | | 20 | 10 | $1.9 \times 10^{2}$ |
| $^{154}Eu$ | | 10 | 5 | $1.5 \times 10^{2}$ |
| $^{155}Eu$ | | 400 | 60 | $1.4 \times 10^{3}$ |
| $^{18}F$ | Fluorine (9) | 20 | 20 | $9.3 \times 10^{7}$ |
| $^{52}Fe$ | Iron (26) | 5 | 5 | $7.3 \times 10^{6}$ |
| $^{55}Fe$ | | 1000 | 1000 | $2.2 \times 10^{3}$ |
| $^{59}Fe$ | | 10 | 10 | $4.9 \times 10^{4}$ |
| $^{67}Ga$ | Gallium (31) | 100 | 100 | $6.0 \times 10^{5}$ |
| $^{68}Ga$ | | 20 | 20 | $4.0 \times 10^{7}$ |
| $^{72}Ga$ | | 7 | 7 | $3.1 \times 10^{6}$ |
| $^{153}Gd$ | Gadolinium (64) | 200 | 100 | $3.6 \times 10^{3}$ |
| $^{159}Gd$ | | 300 | 20 | $1.1 \times 10^{6}$ |
| $^{68}Ge$ | Germanium (32) | 20 | 10 | $7.0 \times 10^{3}$ |
| $^{71}Ge$ | | 1000 | 1000 | $1.6 \times 10^{5}$ |
| $^{3}H$ | Hydrogen (1) see T-Tritium | | | |
| $^{181}Hf$ | Hafnium (72) | 30 | 25 | $1.6 \times 10^{4}$ |
| $^{197m}Hg$ | Mercury (80) | 200 | 200 | $6.6 \times 10^{5}$ |
| $^{197}Hg$ | | 200 | 200 | $2.5 \times 10^{5}$ |
| $^{203}Hg$ | | 80 | 25 | $1.4 \times 10^{4}$ |
| $^{166}Ho$ | Holmium (67) | 30 | 30 | $6.9 \times 10^{5}$ |
| $^{123}I$ | Iodine (53) | 50 | 50 | $1.9 \times 10^{6}$ |
| $^{125}I$ | | 1000 | 70 | $1.7 \times 10^{4}$ |
| $^{126}I$ | | 40 | 10 | $7.8 \times 10^{4}$ |
| $^{129}I$ | | 1000 | 2 | $1.6 \times 10^{-4}$ |
| $^{131}I$ | | 40 | 10 | $1.2 \times 10^{5}$ |
| $^{132}I$ | | 7 | 7 | $1.1 \times 10^{7}$ |
| $^{133}I$ | | 30 | 10 | $1.1 \times 10^{6}$ |
| $^{134}I$ | | 8 | 8 | $2.7 \times 10^{7}$ |
| $^{135}I$ | | 10 | 10 | $3.5 \times 10^{6}$ |
| $^{111}In$ | Indium (49) | 30 | 25 | $4.2 \times 10^{5}$ |
| $^{113m}In$ | | 60 | 60 | $1.6 \times 10^{7}$ |
| $^{114m}In$ | | 30 | 20 | $2.3 \times 10^{4}$ |
| $^{115m}In$ | | 100 | 20 | $6.1 \times 10^{6}$ |
| $^{190}Ir$ | Iridium (77) | 10 | 10 | $6.2 \times 10^{4}$ |
| $^{192}Ir$ | | 20 | 10 | $9.1 \times 10^{3}$ |
| $^{194}Ir$ | | 10 | 10 | $8.5 \times 10^{5}$ |
| $^{42}K$ | Potassium (19) | 10 | 10 | $6.0 \times 10^{6}$ |
| $^{43}K$ | | 20 | 10 | $3.3 \times 10^{6}$ |
| $^{85m}Kr$ (uncompressed)* | Krypton (36) | 100 | 100 | $8.4 \times 10^{6}$ |
| $^{85m}Kr$ (compressed)* | | 3 | 3 | $8.4 \times 10^{6}$ |
| $^{85}Kr$ (uncompressed)* | | 1000 | 1000 | $4.0 \times 10^{2}$ |
| $^{85}Kr$ (compressed)* | | 5 | 5 | $4.0 \times 10^{2}$ |
| $^{87}Kr$ (uncompressed)* | | 20 | 20 | $2.8 \times 10^{7}$ |
| $^{87}Kr$ (compressed)* | | 0.6 | 0.6 | $2.8 \times 10^{7}$ |
| $^{140}La$ | Lanthanum (57) | 30 | 30 | $5.6 \times 10^{5}$ |
| $^{177}Lu$ | Lutetium (71) | 300 | 25 | $1.1 \times 10^{5}$ |
| MFP | Mixed fission products | 10 | 0.4 | ----- |
| $^{28}Mg$ | Magnesium (12) | 6 | 6 | $5.2 \times 10^{6}$ |
| $^{52}Mn$ | Manganese (25) | 5 | 5 | $4.4 \times 10^{5}$ |
| $^{54}Mn$ | | 20 | 20 | $8.3 \times 10^{3}$ |
| $^{56}Mn$ | | 5 | 5 | $2.2 \times 10^{7}$ |
| $^{99}Mo$ | Molybdenum (42) | 100 | 20 | $4.7 \times 10^{5}$ |
| $^{13}N$ | Nitrogen (7) | 20 | 10 | $1.5 \times 10^{9}$ |
| $^{22}Na$ | Sodium (11) | 8 | 8 | $6.3 \times 10^{3}$ |
| $^{24}Na$ | | 5 | 5 | $8.7 \times 10^{6}$ |
| $^{93m}Nb$ | Niobium (41) | 1000 | 200 | $1.1 \times 10^{3}$ |
| $^{95}Nb$ | | 20 | 20 | $3.9 \times 10^{4}$ |
| $^{97}Nb$ | | 20 | 20 | $2.6 \times 10^{7}$ |
| $^{147}Nd$ | Neodymium (60) | 100 | 20 | $8.0 \times 10^{4}$ |
| $^{149}Nd$ | | 30 | 20 | $1.1 \times 10^{7}$ |
| $^{59}Ni$ | Nickel (28) | 1000 | 900 | $8.1 \times 10^{-2}$ |
| $^{63}Ni$ | | 1000 | 100 | $4.6 \times 10^{1}$ |
| $^{65}Ni$ | | 10 | 10 | $1.9 \times 10^{7}$ |

| Symbol of radionuclide | Element and atomic number | $A_1$(Ci) | $A_2$(Ci) | Specific Activity (Ci/g) |
|---|---|---|---|---|
| $^{237}Np$ | Neptunium (93) | 5 | 0.005 | $6.9 \times 10^{-4}$ |
| $^{239}Np$ | | 200 | 25 | $2.3 \times 10^{5}$ |
| $^{185}Os$ | Osmium (76) | 20 | 20 | $7.3 \times 10^{3}$ |
| $^{191}Os$ | | 600 | 200 | $4.6 \times 10^{4}$ |
| $^{191m}Os$ | | 200 | 200 | $1.2 \times 10^{6}$ |
| $^{193}Os$ | | 100 | 20 | $5.3 \times 10^{5}$ |
| $^{32}P$ | Phosphorus (15) | 30 | 30 | $2.9 \times 10^{5}$ |
| $^{230}Pa$ | Protactinum (91) | 20 | 0.8 | $3.2 \times 10^{4}$ |
| $^{231}Pa$ | | 2 | 0.002 | $4.5 \times 10^{-2}$ |
| $^{233}Pa$ | | 100 | 100 | $2.1 \times 10^{4}$ |
| $^{201}Pb$ | Lead (82) | 20 | 20 | $1.7 \times 10^{6}$ |
| $^{210}Pb$ | | 100 | 0.2 | $8.8 \times 10$ |
| $^{212}Pb$ | | 6 | 5 | $1.4 \times 10^{6}$ |
| $^{103}Pd$ | Palladium (46) | 1000 | 700 | $7.5 \times 10^{4}$ |
| $^{109}Pd$ | | 100 | 20 | $2.1 \times 10^{6}$ |
| $^{147}Pm$ | Promethium (61) | 1000 | 25 | $9.4 \times 10^{2}$ |
| $^{149}Pm$ | | 100 | 20 | $4.2 \times 10^{5}$ |
| $^{210}Po$ | Polonium (84) | 200 | 0.2 | $4.5 \times 10^{3}$ |
| $^{142}Pr$ | Praseodymium (59) | 10 | 10 | $1.2 \times 10^{4}$ |
| $^{143}Pr$ | | 300 | 20 | $6.6 \times 10^{4}$ |
| $^{191}Pt$ | Platinum (78) | 100 | 100 | $2.3 \times 10^{5}$ |
| $^{193m}Pt$ | | 200 | 200 | $2.0 \times 10^{5}$ |
| $^{197m}Pt$ | | 300 | 20 | $1.2 \times 10^{7}$ |
| $^{197}Pt$ | | 300 | 20 | $8.8 \times 10^{5}$ |
| $^{238}Pu$ | Plutonium (94) | 3 | 0.003 | $1.7 \times 10^{1}$ |
| $^{239}Pu$ | | 2 | 0.002 | $6.2 \times 10^{-2}$ |
| $^{240}Pu$ | | 2 | 0.002 | $2.3 \times 10^{-1}$ |
| $^{241}Pu$ | | 1000 | 0.1 | $1.1 \times 10^{2}$ |
| $^{242}Pu$ | | 3 | 0.003 | $3.9 \times 10^{-3}$ |
| $^{223}Ra$ | Radium (88) | 50 | 0.2 | $5.0 \times 10^{4}$ |
| $^{224}Ra$ | | 6 | 0.5 | $1.6 \times 10^{5}$ |
| $^{226}Ra$ | | 10 | 0.05 | 1.0 |
| $^{228}Ra$ | | 10 | 0.05 | $2.3 \times 10^{2}$ |
| $^{81}Rb$ | Rubidium (37) | 30 | 25 | $8.2 \times 10^{6}$ |
| $^{86}Rb$ | | 30 | 30 | $8.1 \times 10^{4}$ |
| $^{87}Rb$ | | Unlimited | Unlimited | $6.6 \times 10^{-8}$ |
| Rb (Natural) | | Unlimited | Unlimited | $1.8 \times 10^{-8}$ |
| $^{186}Re$ | Rhenium (75) | 100 | 20 | $1.9 \times 10^{5}$ |
| $^{187}Re$ | | Unlimited | Unlimited | $3.8 \times 10^{-8}$ |
| $^{188}Re$ | | 10 | 10 | $1.0 \times 10^{6}$ |
| Re (Natural) | | Unlimited | Unlimited | $2.4 \times 10^{-8}$ |
| $^{103m}Rh$ | Rhodium (45) | 1000 | 1000 | $3.2 \times 10^{7}$ |
| $^{105}Rh$ | | 200 | 25 | $8.2 \times 10^{5}$ |
| $^{222}Rn$ | Radon (86) | 10 | 2 | $1.5 \times 10^{5}$ |
| $^{97}Ru$ | Ruthenium (44) | 80 | 80 | $5.5 \times 10^{5}$ |
| $^{103}Ru$ | | 30 | 25 | $3.2 \times 10^{4}$ |
| $^{105}Ru$ | | 20 | 20 | $6.6 \times 10^{6}$ |
| $^{106}Ru$ | | 10 | 7 | $3.4 \times 10^{3}$ |
| $^{35}S$ | Sulphur (16) | 1000 | 60 | $4.3 \times 10^{4}$ |
| $^{122}Sb$ | Antimony (51) | 30 | 30 | $3.9 \times 10^{5}$ |
| $^{124}Sb$ | | 5 | 5 | $1.8 \times 10^{4}$ |
| $^{125}Sb$ | | 40 | 25 | $1.4 \times 10^{3}$ |
| $^{46}Sc$ | Scandium (21) | 8 | 8 | $3.4 \times 10^{4}$ |
| $^{47}Sc$ | | 200 | 20 | $8.2 \times 10^{5}$ |
| $^{48}Sc$ | | 5 | 5 | $1.5 \times 10^{6}$ |
| $^{75}Se$ | Selenium (34) | 40 | 40 | $1.4 \times 10^{4}$ |
| $^{31}Si$ | Silicon (14) | 100 | 20 | $3.9 \times 10^{7}$ |
| $^{147}Sm$ | Samarium (62) | Unlimited | Unlimited | $2.0 \times 10^{-8}$ |
| $^{151}Sm$ | | 1000 | 90 | $2.6 \times 10^{1}$ |
| $^{153}Sm$ | | 300 | 20 | $4.4 \times 10^{5}$ |
| $^{113}Sn$ | Tin (50) | 60 | 60 | $1.0 \times 10^{4}$ |
| $^{119m}Sn$ | | 100 | 100 | $4.4 \times 10^{3}$ |
| $^{125}Sn$ | | 10 | 10 | $1.1 \times 10^{5}$ |
| $^{85m}Sr$ | Strontium (38) | 80 | 80 | $3.2 \times 10^{7}$ |
| $^{85}Sr$ | | 30 | 30 | $2.4 \times 10^{4}$ |
| $^{87m}Sr$ | | 50 | 50 | $1.2 \times 10^{7}$ |
| $^{89}Sr$ | | 100 | 10 | $2.9 \times 10^{4}$ |
| $^{90}Sr$ | | 10 | 0.4 | $1.5 \times 10^{2}$ |
| $^{91}Sr$ | | 10 | 10 | $3.6 \times 10^{6}$ |
| $^{92}Sr$ | | 10 | 10 | $1.3 \times 10^{7}$ |

| Symbol of radionuclide | Element and atomic number | $A_1$(Ci) | $A_2$(Ci) | Specific Activity |
|---|---|---|---|---|
| | | | (Ci/g) | |
| T (uncompressed)* | Tritium (1) | 1000 | 1000 | $9.7 \times 10^3$ |
| T (compressed)* | | 1000 | 1000 | $9.7 \times 10^3$ |
| T (activated luminous paint) | | 1000 | 1000 | $9.7 \times 10^3$ |
| T (adsorbed on solid carrier | | 1000 | 1000 | $9.7 \times 10^3$ |
| T (tritiated water) | | 1000 | 1000 | $9.7 \times 10^3$ |
| T (other forms) | | 20 | 20 | $9.7 \times 10^3$ |
| $^{182}Ta$ | Tantalum (73) | 20 | 20 | $6.2 \times 10^3$ |
| $^{160}Tb$ | Terbium (65) | 20 | 10 | $1.1 \times 10^4$ |
| $^{96m}Tc$ | Technetium (43) | 1000 | 1000 | $3.8 \times 10^7$ |
| $^{96}Tc$ | | 6 | 6 | $3.2 \times 10^5$ |
| $^{97m}Tc$ | | 1000 | 200 | $1.5 \times 10^4$ |
| $^{97}Tc$ | | 1000 | 400 | $1.4 \times 10^{-3}$ |
| $^{99m}Tc$ | | 100 | 100 | $5.2 \times 10^6$ |
| $^{99}Tc$ | | 1000 | 25 | $1.7 \times 10^{-2}$ |
| $^{125m}Te$ | Tellurium (52) | 1000 | 100 | $1.8 \times 10^4$ |
| $^{127m}Te$ | | 300 | 20 | $4.0 \times 10^4$ |
| $^{127}Te$ | | 300 | 20 | $2.6 \times 10^6$ |
| $^{129m}Te$ | | 30 | 10 | $2.5 \times 10^4$ |
| $^{129}Te$ | | 100 | 20 | $2.0 \times 10^7$ |
| $^{131m}Te$ | | 10 | 10 | $8.0 \times 10^5$ |
| $^{132}Te$ | | 7 | 7 | $3.1 \times 10^5$ |
| $^{227}Th$ | Thorium (90) | 200 | 0.2 | $3.2 \times 10^4$ |
| $^{228}Th$ | | 6 | 0.008 | $8.3 \times 10^2$ |
| $^{230}Th$ | | 3 | 0.003 | $1.9 \times 10^{-2}$ |
| $^{231}Th$ | | 1000 | 25 | $5.3 \times 10^5$ |
| $^{232}Th$ | | Unlimited | Unlimited | $1.1 \times 10^{-7}$ |
| $^{234}Th$ | | 10 | 10 | $2.3 \times 10^4$ |
| Th (Natural) | | Unlimited | Unlimited | $2.2 \times 10^{-7}$ |
| Th (irradiated)** | | --- | --- | ----- |
| $^{200}Tl$ | Thallium (81) | 20 | 20 | $5.8 \times 10^5$ |
| $^{201}Tl$ | | 200 | 200 | $2.2 \times 10^5$ |
| $^{202}Tl$ | | 40 | 40 | $5.4 \times 10^4$ |
| $^{224}Tl$ | | 300 | 10 | $4.3 \times 10^2$ |
| $^{170}Tm$ | Thulium (69) | 300 | 10 | $6.0 \times 10^3$ |
| $^{171}Tm$ | | 1000 | 100 | $1.1 \times 10^3$ |
| $^{230}U$ | Uranium (92) | 100 | 0.1 | $2.7 \times 10^4$ |
| $^{232}U$ | | 30 | 0.03 | $2.1 \times 10$ |
| $^{233}U$ | | 100 | 0.1 | $9.5 \times 10^{-3}$ |
| $^{234}U$ | | 100 | 0.1 | $6.2 \times 10^{-3}$ |
| $^{235}U$ | | 100 | 0.2 | $2.1 \times 10^{-6}$ |
| $^{236}U$ | | 200 | 0.2 | $6.3 \times 10^{-5}$ |
| $^{238}U$ | | Unlimited | Unlimited | $3.3 \times 10^{-7}$ |
| U (natural) | | Unlimited | Unlimited | (See Section 24) |
| U (enriched) less than 20% | | Unlimited | Unlimited | (See Section 24) |
| U (enriched) 20% or greater | | 100 | 0.1 | (See Section 24) |
| U (depleted) | | Unlimited | Unlimited | (See Section 24) |
| U (irradiated)*** | | --- | --- | ----- |
| $^{48}V$ | Vanadium (23) | 6 | 6 | $1.7 \times 10^5$ |
| $^{181}W$ | Tungsten (74) | 200 | 100 | $5.0 \times 10^3$ |
| $^{185}W$ | | 1000 | 25 | $9.7 \times 10^{-3}$ |
| $^{187}W$ | | 40 | 20 | $7.0 \times 10^5$ |
| $^{127}Xe$ (uncompressed)* | Xenon (54) | 70 | 70 | $2.8 \times 10^4$ |
| $^{127}Xe$ (compressed)* | | 5 | 5 | $2.8 \times 10^4$ |
| $^{131m}Xe$ (compressed)* | | 10 | 10 | $1.0 \times 10^5$ |
| $^{131m}Xe$ (uncompressed)* | | 100 | 100 | $1.0 \times 10^5$ |
| $^{133}Xe$ (uncompressed)* | | 1000 | 1000 | $1.9 \times 10^5$ |
| $^{133}Xe$ (compressed)* | | 5 | 5 | $1.9 \times 10^5$ |
| $^{135}Xe$ (uncompressed)* | | 70 | 70 | $2.5 \times 10^5$ |
| $^{135}Xe$ (compressed)* | | 2 | 2 | $2.5 \times 10^5$ |
| $^{87}Y$ | Yttrium (39) | 20 | 20 | $4.5 \times 10^1$ |
| $^{90}Y$ | | 10 | 10 | $2.5 \times 10^5$ |
| $^{91m}Y$ | | 30 | 30 | $4.1 \times 10^7$ |
| $^{91}Y$ | | 30 | 30 | $2.5 \times 10^4$ |
| $^{92}Y$ | | 10 | 10 | $9.5 \times 10^6$ |
| $^{93}Y$ | | 10 | 10 | $3.2 \times 10^6$ |

| Symbol of radionuclide | Element and atomic number | $A_1$(Ci) | $A_2$(Ci) (Ci/g) | Specific Activity |
|---|---|---|---|---|
| $^{169}Yb$ | Ytterbium (70) | 80 | 80 | $2.3 \times 10^5$ |
| $^{175}Yb$ | | 400 | 25 | $1.8 \times 10^5$ |
| $^{65}Zn$ | Zinc (30) | 30 | 30 | $8.0 \times 10^3$ |
| $^{69m}Zn$ | | 40 | 40 | $3.3 \times 10^6$ |
| $^{69}Zn$ | | 300 | 20 | $5.3 \times 10^7$ |
| $^{93}Zr$ | Zirconium (40) | 1000 | 200 | $3.5 \times 10^{-3}$ |
| $^{95}Zr$ | | 20 | 20 | $2.1 \times 10^4$ |
| $^{97}Zr$ | | 20 | 20 | $2.0 \times 10^6$ |

* For the purpose of this section, compressed gas means at a pressure which exceeds the ambient atmospheric pressure at the location where the containment system was closed.

** The values of $A_1$ and $A_2$ must be calculated in accordance with the procedure specified in Section 20(2)(c) of this regulation, taking into account the activity of the fission products and of the uranium-233 in addition to that of the thorium.

*** The values of $A_1$ and $A_2$ must be calculated in accordance with the procedure specified in Section 20(2)(c) of this regulation, taking into account the activity of the fission products and plutonium isotopes in addition to that of the uranium.

Section 22. Table. The following table is to be used for the:

RELATIONSHIP BETWEEN $A_1$ AND $E_{max}$ FOR BETA EMITTERS

| $E_{max}$(MeV) | $A_1$(Ci) |
|---|---|
| less than 0.5 | 1000 |
| 0.5 - less than 1.0 | 300 |
| 1.0 - less than 1.5 | 100 |
| 1.5 - less than 2.0 | 30 |
| greater than or equal to 2.0 | 10 |

Section 23. Table. The following is to be used for the:

RELATIONSHIP BETWEEN $A_3$ AND THE ATOMIC NUMBER OF THE RADIONUCLIDE

| Atomic Number | $A_3$ Half-life less than 1000 days | $A_3$ Half-life 1000 days to $10^6$ years | $A_3$ Half-life greater than $10^6$ years |
|---|---|---|---|
| 1 to 81 | 3 Ci | 0.5 Ci | 3 Ci |
| 82 and above | .002 Ci | .002 Ci | 3 Ci |

Section 24. Table. The following table is to be used for the:

ACTIVITY-MASS RELATIONSHIPS FOR URANIUM/THORIUM

| Thorium and Uranium enrichment* wt%$^{235}U$ present | Specific Activity Ci/g | Specific Activity g/Ci |
|---|---|---|
| 0.45 | $5.0 \times 10^{-7}$ | $2.0 \times 10^6$ |
| 0.72 (natural) | $7.06 \times 10^{-7}$ | $1.42 \times 10^6$ |
| 1.0 | $7.6 \times 10^{-7}$ | $1.3 \times 10^6$ |
| 1.5 | $1.0 \times 10^{-6}$ | $1.0 \times 10^6$ |
| 5.0 | $2.7 \times 10^{-6}$ | $3.7 \times 10^5$ |
| 10.0 | $4.8 \times 10^{-6}$ | $2.1 \times 10^5$ |
| 20.0 | $1.0 \times 10^{-5}$ | $1.0 \times 10^5$ |
| 35.0 | $2.0 \times 10^{-5}$ | $5.0 \times 10^4$ |
| 50.0 | $2.5 \times 10^{-5}$ | $4.0 \times 10^4$ |
| 90.0 | $5.8 \times 10^{-5}$ | $1.7 \times 10^4$ |
| 93.0 | $7.0 \times 10^{-5}$ | $1.4 \times 10^4$ |
| 95.0 | $9.1 \times 10^{-5}$ | $1.1 \times 10^4$ |
| Natural Thorium | $2.2 \times 10^{-7}$ | $4.6 \times 10^6$ |

*The figures for uranium include representative values for the activity of the uranium-234 which is concentrated during the enrichment process. The activity for thorium includes the equilibrium concentration of thorium-228.

C HERNANDEZ, M.D., M.P.H.
E. AUSTIN, JR. Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing. R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs (note any effects upon competition): NA
(b) Reporting and paperwork requirements: None required
(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:
1. First year: NA
2. Continuing costs or savings: NA
3. Additional factors increasing or decreasing costs: NA
(b) Reporting and paperwork requirements: None required
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: NA
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: NA
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 100:075. Group classifications.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 [directs that the Secretary of the Cabinet for Human Resources shall] to provide by regulation for the registration and licensing of the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. The purpose of this regulation is to classify by groups specific diagnostic procedures using radioactive material [into groups].

Section 1. Applicability. This regulation groups specific radioactive material [diagnostic procedures] to facilitate the issuance of licenses for the medical use of radioactive material.

Section 2. Groups of Medical [Diagnostic] Uses of Radioactive Material [in Humans]. [Whenever an applicant has been approved, under the appropriate provisions of these regulations, to perform any one (1) of the diagnostic procedures listed in the following groups, the applicant may be approved to perform all the diagnostic procedures within that group.]
(1) Group I. Use of prepared radiopharmaceuticals for certain diagnostic studies involving measurements of uptake, dilution and excretion. This group does not include uses involving imaging or [and tumor] localization studies.
(a) Chromium-51 as sodium chromate or labeled human serum albumin [Iodine 131 or Iodine 125 as sodium iodide for thyroid uptake].
(b) Cobalt-57 as labeled cyanocobalamin [Iodine 131 or Iodine 125 as iodinated human serum albumin (IHSA) for determinations of blood and blood plasma volume and for studies of cardiovascular function and protein turnover].
(c) Cobalt-58 as labeled cyanocobalamin [Iodine 131 or Iodine 125 as labeled rose bengal for liver function studies].
(d) Cobalt-60 as labeled cyanocobalamin [Iodine 131 or Iodine 125 as labeled fats or fatty acids for fat absorption studies].
(e) Iodine-123 as sodium iodide [Iodine 131 or Iodine 125 as labeled iodopyracet, sodium iodohippurate, sodium diatrizoate, diatrizoate methylglucamine, sodium diprotrizoate, sodium acetrizoate, or sodium iothalamate for kidney function studies].
(f) Iodine-125 as sodium iodide, iodinated human serum albumin (IHSA), oleic acids or sodium iothalamate [Chromium 51 as labeled human serum albumin for gastrointestinal protein loss studies].
(g) Iodine-131 as sodium iodide, iodinated human serum albumin (IHSA), labeled rose bengal, triolein, or sodium iodohippurate [Chromium 51 as sodium chromate for determination of red blood cell volumes and studies of red blood cell survival time and gastrointestinal blood loss].
(h) Iron-59 as [chloride,] citrate[, or sulfate for iron turnover studies].
(i) Potassium-42 as chloride [Cobalt 57, Cobalt 58 or Cobalt 60 as labeled cyanocobalamin (vitamin B-12) for intestinal absorption studies].
(j) Sodium-24 as chloride [Potassium 42 as chloride for potassium space determinations].
(k) Technetium-99m as pertechnetate [Sodium 24 as chloride for sodium space determinations].
[(l) Technetium 99m as pertechnetate for blood flow studies.]
[(m) Mercury 197 as chlormerodrin for kidney function studies.]
(l) [(n)] Any radioactive material in a radiopharmaceutical and for a diagnostic use involving measurements of uptake, dilution or excretion for which a "Notice of Claimed Investigational Exemption for a New Drug" (IND) has been accepted by the Food and Drug Administration (FDA).
(2) Group II. Use of prepared radiopharmaceuticals for diagnostic studies involving imaging or [and tumor] localization studies:
(a) Chromium-51 as human serum albumin (HSA) [Iodine 125 as fibrinogen for detection and monitoring of developing deep vein thrombosis].
(b) Fluorine-18 in solution [Iodine 131 or Iodine 125 as sodium iodide for thyroid imaging].
(c) Gallium-67 as citrate [Iodine 131 as iodinated human serum albumin (IHSA) for brain tumor localizations and cardiac imaging].
(d) Gold-198 in colloidal form [Iodine 131 as macroaggregated iodinated human serum albumin for lung imaging].
(e) Indium-113m as chloride [Iodine 131 as colloidal (microaggregated) iodinated human serum albumin for liver imaging].
(f) Iodine-123 as sodium iodide [Iodine 131 as labeled rose bengal for liver imaging].
(g) Iodine-125 as sodium iodide of fibrinogen [Iodine 131 as iodopyracet, sodium iodohippurate, sodium diatrizoate, diatrizoate methylglucamine, sodium diprotrizoate or sodium acetrizoate for kidney imaging].
(h) Iodine-131 as sodium iodide, iodinated human serum albumin (IHSA), macroaggregated iodinated human serum albumin, colloidal (microaggregated) iodinated human serum albumin, rose bengal or sodium iodohippurate [sodium iodipamide for cardiac imaging].

(i) Mercury-197 as chlormerodrin [Iodine 131 as iodinated human serum albumin (IHSA) for placenta localization].
(j) Mercury-197 as chlormerodrin [Chromium 51 as sodium chromate for spleen imaging].
(k) Selenium-75 as selenomethionine [Chromium 51 as labeled human serum albumin for placenta localization].
(l) Strontium-85 as nitrate [Gold 198 in colloidal form for liver imaging].
(m) Strontium-87m as chloride [Mercury 197 as labeled chlormerodrin for kidney and brain imaging].
(n) Technetium-99m as pertechnetate, sulfur colloid, or macroaggregated human serum albumin [Mercury 203 as labeled chlormerodrin for brain imaging].
(o) Thallium-201 as chloride [Selenium 75 as labeled selenomethionine for pancreas imaging].
(p) Ytterbium-169 as pentatate sodium [Strontium 85 as nitrate or chloride for bone imaging in patients with suspected or diagnosed cancer].
[(q) Technetium 99m as pertechnetate for brain imaging.]
[(r) Technetium 99m as pertechnetate for thyroid imaging.]
[(s) Technetium 99m as pertechnetate for salivary gland and blood pool imaging including placenta localization.]
[(t) Technetium 99m as labeled sulfur colloid for liver, spleen and bone marrow imaging.]
[(u) Technetium 99m as labeled macroaggregated human serum albumin for lung imaging.]
[(v) Ytterbium 169 as pentatate calcium trisodium labeled diethylentriamine pentaacetic acid (DTPA) for cisternography.]
[(w) Indium 113m as chloride for blood pool imaging, including placenta localization.]
(q) [(x)] Any radioactive material in a radiopharmaceutical prepared from a reagent kit listed in subsection (3)(c) of this section [for a use listed in that subsection].
(r) [(y)] Any radioactive material in a radiopharmaceutical and for a diagnostic use involving imaging except those in gaseous forms for which a "Notice of Claimed Investigational Exemption for a New Drug" (IND) or a "New Drug Application" (NDA) has been accepted by the Food and Drug Administration (FDA).
(3) Group III. Use of generators and reagent kits for the preparation and use of radiopharmaceuticals containing radioactive material for certain diagnostic uses.
(a) Molybdenum 99/technetium 99m generators for the elution of technetium 99m as pertechnetate. [for:]
[1. Brain imaging,]
[2. Thyroid imaging,]
[3. Salivary gland imaging.]
[4. Blood pool imaging including placenta localization,]
[5. Blood flow studies,]
[6. Use with reagent kits for preparation and use of radiopharmaceuticals containing technetium 99m as provided in subsection (3)(c) and (d) of this section.]
(b) Technetium-99m as pertechnetate for use with reagent kits for preparation and use of radiopharmaceuticals containing technetium-99m as provided in subsection (3)(c) and (f) [(d)] of this section.
(c) Reagent kits for preparation of technetium-99m labeled:
1. Sulfur colloid [for liver, spleen and bone marrow imaging],
2. Pentatate sodium [Iron-ascorbate diethylenetriamine pentaacetic acid complex for kidney imaging],
3. Human serum albumin microspheres [Diethylenetriamine pentaacetic acid (Sn) for kidney imaging and kidney function studies],
4. Polyphosphates [Diethylenetriamine pentaacetic acid (Sn) for brain imaging],
5. Macroaggregated human serum albumin [Human serum albumin microspheres for lung imaging],
6. Etidronate sodium [Polyphosphates for bone imaging],
7. Stannous pyrophosphate [Macroaggregated human serum albumin for lung imaging],
8. Human serum albumin [Distannous etidronate complex for bone imaging],
9. Medronate sodium [Stannous pyrophosphate for bone and cardiac imaging],
10. Gluceptate sodium [Human serum albumin for heart blood pool imaging],
11. Oxidronate sodium [Medronate sodium for bone imaging],
12. Disofenin [Gluceptate sodium for brain and renal perfusion imaging].
13. Succimer.
14. Albumin colloid.
(d) Tin-113/indium-113m generators for the elution of indium-113m as chloride [for blood pool imaging including placenta localization].
(e) Yttrium-87/strontium-87m generators for the elution of strontium-87m.
(f) [(e)] Any generator or reagent kit for preparation and diagnostic use of a radiopharmaceutical containing radioactive material for which generator or reagent kit a "Notice of Claimed Investigational Exemption for a New Drug" (IND) has been accepted by the Food and Drug Administration (FDA).
(4) Group IV. Use of prepared radiopharaceuticals for certain therapeutic uses that do not normally require hospitalization for purposes of radiation safety.
(a) Iodine-131 as iodide for treatment of hyperthyroidism and cardiac dysfunction.
(b) Phosphorus-32 as soluble phosphate for treatment of polycythemia vera, leukemia, and bone metastases.
(c) Phosphorus-32 as colloidal chromic phosphate for intracavitary treatment of malignant effusions.
(5) Group V. Use of prepared radiopharmaceuticals for certain therapeutic uses that normally require hospitalization for purposes of radiation safety.
(a) Gold-198 as colloid for intracavitary treatment of malignant effusions.
(b) Iodine-131 as iodide for treatment of thyroid carcinoma.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**(Proposed Amendment)**

**902 KAR 100:080. Exempt quantities.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and to regulate the handling and disposal of radioactive waste. The purpose of this regulation is to provide a list of quantities of specific radionuclides which are exempted from the requirements of these regulations.

Section 1. Applicability. This regulation exempts certain quantities of radionuclides from the requirements of the cabinet's radiation regulations.

Section 2. Table. Except as provided in other applicable provisions of these regulations, any person is exempt from these regulations, to the extent that such person receives, possesses, uses, transfers, owns or acquires products or materials containing radioactive material in individual quantities not in excess of those listed in the following table:

| Radioactive Material | Micro-curies | Radioactive Material | Micro-curies |
|---|---|---|---|
| Antimony-122 | 100 | Osmium-191m | 100 |
| Antimony-124 | 10 | Osmium-191 | 100 |
| Antimony-125 | 10 | Osmium-193 | 100 |
| Arsenic-73 | 100 | [Oxygen-15 | 10] |
| Arsenic-74 | 10 | Palladium-103 | 100 |
| Arsenic-76 | 10 | Palladium-109 | 100 |
| Arsenic-77 | 100 | Phosphorous-32 | 10 |
| Barium-131 | 10 | Platinum-191 | 100 |
| Barium-133 | 10 | Platinum-193m | 100 |
| Barium-140 | 10 | Platinum-193 | 100 |
| [Beryllium-7 | 100] | Platinum-197m | 100 |
| Bismuth-210 | 1 | Platinum-197 | 100 |
| Bromine-82 | 10 | Polonium-210 | 0.1 |
| Cadmium-109 | 10 | Potassium-42 | 10 |
| Cadmium-115m | 10 | Potassium-43 | 10 |
| Cadmium-115 | 100 | Praseodymium-142 | 100 |
| Calcium-45 | 10 | Praseodymium-143 | 100 |
| Calcium-47 | 10 | Promethium-147 | 10 |
| [Carbon-11 | 10] | Promethium-149 | 10 |
| Carbon-14 | 100 | [Radon-222 | 10] |
| Cerium-141 | 100 | Rhenium-186 | 100 |
| Cerium-143 | 100 | Rhenium-188 | 100 |
| Cerium-144 | 1 | Rhodium-103m | 100 |
| Cesium-129 | 100[10] | Rhodium-105 | 100 |
| | | Rubidium-81 | 10 |
| Cesium-131 | 1,000 | Rubidium-86 | 10 |
| Cesium-134m | 100 | Rubidium-87 | 10 |
| Cesium-134 | 1 | Ruthenium-97 | 100 |
| Cesium-135 | 10 | Ruthenium-103 | 10 |
| Cesium-136 | 10 | Ruthenium-105 | 10 |
| Cesium-137 | 10 | Ruthenium-106 | 1 |
| Chlorine-36 | 10 | Samarium-151 | 10 |
| Chlorine-38 | 10 | Samarium-153 | 100 |
| Chromium-51 | 1,000 | Scandium-46 | 10 |
| Cobalt-57 | 100 | Scandium-47 | 100 |
| Cobalt-58m | 10 | Scandium-48 | 10 |
| Cobalt-58 | 10 | Selenium-75 | 10 |
| Cobalt-60 | 1 | Silicon-31 | 100 |
| Copper-64 | 100 | Silver-105 | 10 |
| Dysprosium-165 | 10 | Silver-110m | 1 |
| Dysporsium-166 | 100 | Silver-111 | 100 |
| Erbium-169 | 100 | Sodium-22 | 10 [1] |
| Erbium-171 | 100 | Sodium-24 | 10 |
| Europium-152 | | Strontium-85 | 10 |
| (9.2h) | 100 | [Strontium-87m | 10] |
| Europium-152 | | Strontium-89 | 1 |
| (13 yr.) | 1 | Strontium-90 | 0.1 |
| Europium-154 | 1 | Strontium-91 | 10 |
| Europium-155 | 10 | Strontium-92 | 10 |
| Fluorine-18 | 1,000 | Sulfur-35 | 100 |
| Gadolinium-153 | 10 | Tantalium-182 | 10 |
| Gadolinium-159 | 100 | Technetium-96 | 10 |
| Gallium-67 | 100 | Technetium-97m | 100 |
| Gallium-72 | 10 | Technetium-97 | 100 |
| Germanium-68 | 10 | | |
| Germanium-71 | 100 | Technetium-99m | 100 |
| Gold-195 | 10 | | |
| Gold-198 | 100 | Technetium-99 | 10 |
| Gold-199 | 100 | Tellurium-125m | 10 |
| Hafnium-181 | 10 | Tellurium-127m | 10 |
| Holmium-166 | 100 | Tellurium-127 | 100 |
| Hydrogen-3 | 1,000 | Tellurium-129m | 10 |
| Indium-111 | 100 | Tellurium-129 | 100 |
| Indium-113m | 100 | Tellurium-131m | 10 |
| Indium-114m | 10 | Tellurium-132 | 10 |
| Indium-115m | 100 | Terbium-160 | 10 |
| Indium-115 | 10 | Thallium-200 | 100 |
| Iodine-123 | 100 | Thallium-201 | 100 |
| Iodine-125 | 1 | Thallium-202 | 100 |
| Iodine-126 | 1 | Thallium-204 | 10 |

| | | | |
|---|---|---|---|
| Iodine-129 | 0.1 | Thulium-170 | 10 |
| Iodine-131 | 1 | Thulium-171 | 10 |
| Iodine-132 | 10 | Tin-113 | 10 |
| Iodine-133 | 1 | Tin-125 | 10 |
| Iodine-134 | 10 | Tungsten-181 | 10 |
| Iodine-135 | 10 | Tungsten-185 | 10 |
| Iridium-192 | 10 | Tungsten-187 | 100 |
| Iridium-194 | 100 | Vandium-48 | 10 |
| Iron-52 | 10 | Xenon-131m | 1,000 |
| Iron-55 | 100 | Xenon-133 | 100 |
| Iron-59 | 10 | Xenon-135 | 100 |
| Krypton-85 | 100 | Ytterbium-175 | 100 |
| Krypton-87 | 10 | Yttrium-87 | 10 |
| | | Ytrium-88 | 10 |
| Lanthanum-140 | 10 | Yttrium-90 | 10 |
| Lutetium-177 | 100 | Yttrium-91 | 10 |
| Manganese-52 | 10 | Yttrium-92 | 100 |
| Manganese-54 | 10 | Yttrium-93 | 100 |
| Manganese-56 | 10 | Zinc-65 | 10 |
| Mercury-197m | 100 | Zinc-69m | 100 |
| Mercury-197 | 100 | Zinc-69 | 1,000 |
| Mercury-203 | 10 | Zirconium-93 | 10 |
| Molybdenum-99 | 100 | Zirconium-95 | 10 |
| Neodymium-147 | 100 | Zirconium-97 | 10 |
| Neodymium-149 | 100 | Any radioactive | |
| Nickel-59 | 100 | material not | |
| Nickel-63 | 10 | listed above | |
| Nickel-65 | 100 | other than | |
| Niobium-93m | 10 | alpha emitting | |
| Niobium-95 | 10 | radioactive | |
| Niobium-97 | 10 | material | 0.1 |
| Osmium-185 | 10 | | |

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

## CABINET FOR HUMAN RESOURCES
## Department for Health Services
## (Proposed Amendment)

**902 KAR 100:085. Exempt concentrations.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and to regulate the handling and disposal of radioactive waste. The purpose of this regulation is to provide a list of concentrations for specific radionuclides which are exempted from the requirements of these regulations.

Section 1. Applicability. This regulation exempts certain concentrations of radionuclides from the requirements of the cabinet's radiation regulations.

Section 2. Table. (1) In the following table values are given in Column I only for those materials normally used as gases. Values given in Column II are equivalent values for microcuries per gram when applicable to solids.
(2) Except as provided in other applicable provisions of these regulations, any person is exempt from these regulations, to the extent that such person receives, possesses, uses, transfers, owns or acquires products or materials containing radioactive material in concentrations not in excess of those listed in the following table:

Exempt Concentrations

| Element (atomic number) | Isotopes | Column I Gas concentration uCi/ml[1] | Column II Liquid and Solid concentration mCi/ml[2] |
|---|---|---|---|
| Antimony (51) | Sb-122 | | $3\times10^{-4}$ |
| | Sb-124 | | $2\times10^{-4}$ |
| | Sb-125 | | $1\times10^{-3}$ |
| Argon (18) | Ar-37 | $1\times10^{-3}$ | |
| | Ar-41 | $4\times10^{-7}$ | |
| Arsenic (33) | As-73 | | $5\times10^{-3}$ |
| | As-74 | | $5\times10^{-4}$ |
| | As-76 | | $2\times10^{-4}$ |
| | As-77 | | $8\times10^{-4}$ |

| | | | |
|---|---|---|---|
| Barium (56) | Ba-131 | | $2x10^{-3}$ |
| | Ba-140 | | $3x10^{-4}$ |
| Beryllium (4) | Be-7 | | $2x10^{-2}$ |
| Bismuth (83) | Bi-206 | | $4x10^{-4}$ |
| Bromine (35) | Br-82 | $4x10^{-7}$ | $3x10^{-3}$ |
| Cadmium (48) | Cd-109 | | $2x10^{-3}$ |
| | Cd-115m | | $3x10^{-4}$ |
| | Cd-115 | | $3x10^{-4}$ |
| Calcium (20) | Ca-45 | | $9x10^{-5}$ |
| | Ca-47 | | $5x10^{-4}$ |
| Carbon (6) | C-14 | $1x10^{-6}$ | $8x10^{-3}$ |
| Cevium (58) | Ce-141 | | $9x10^{-4}$ |
| | Ce-143 | | $4x10^{-4}$ |
| | Ce-144 | | $1x10^{-4}$ |
| Cesium (55) | Cs-131 | | $2x10^{-2}$ |
| | Cs-134m | | $6x10^{-2}$ |
| | Cs-134 | | $9x10^{-5}$ |
| Chlorine (17) | Cl-38 | $9x10^{-7}$ | $4x10^{-3}$ |
| Chromium (24) | Cr-51 | | $2x10^{-2}$ |
| Cobalt (27) | Co-57 | | $5x10^{-3}$ |
| | Co-58 | | $1x10^{-3}$ |
| | Co-60 | | $5x10^{-4}$ |
| Copper (29) | Cu-64 | | $3x10^{-3}$ |
| Dysprosium (66) | Dy-165 | | $4x10^{-3}$ |
| | Dy-166 | | $4x10^{-4}$ |
| Erbium (68) | Er-169 | | $9x10^{-4}$ |
| | Er-171 | | $1x10^{-3}$ |
| Europium (63) | Eu-152 (9.2 h) [(T/2=9.2 hours)] | | $6x10^{-4}$ |
| | Eu-155 | | $2x10^{-3}$ |
| Fluorine (9) | F-18 | $2x10^{-6}$ | $8x10^{-3}$ |
| Gadolinium (64) | Gd-153 | | $2x10^{-3}$ |
| | Gd-159 | | $8x10^{-4}$ |
| Gallium (31) | Ga-72 | | $4x10^{-4}$ |
| Germanium (32) | Ge-71 | | $2x10^{-2}$ |
| Gold (79) | Au-196 | | $2x10^{-3}$ |
| | Au-198 | | $5x10^{-4}$ |
| | Au-199 | | $2x10^{-2}$ |
| Hafnium (72) | Hf-181 | | $7x10^{-4}$ |
| Hydrogen (1) | H-3 | $5x10^{-6}$ | $3x10^{-2}$ |
| Indium (49) | In-113m | | $1x10^{-2}$ |
| | In-114m | | $2x10^{-4}$ |
| Iodine (53) | I-126 | $3x10^{-9}$ | $2x10^{-5}$ |
| | I-131 | $3x10^{-9}$ | $2x10^{-5}$ |
| | I-132 | $8x10^{-8}$ | $6x10^{-4}$ |
| | I-133 | $1x10^{-8}$ | $7x10^{-5}$ |
| | I-134 | $2x10^{-7}$ | $1x10^{-3}$ |
| Iridium (77) | Ir-190 | | $2x10^{-3}$ |
| | Ir-192 | | $4x10^{-3}$ |
| | Ir-194 | | $3x10^{-4}$ |
| Iron (26) | Fe-55 | | $8x10^{-3}$ |
| | Fe-59 | | $6x10^{-4}$ |
| Krypton (36) | Kr-85m | | $1x10^{-6}$ |
| | Kr-85 | | $3x10^{-6}$ |
| Lanthanum (57) | La-140 | | $2x10^{-4}$ |
| Lead (82) | Pb-203 | | $4x10^{-3}$ |
| Lutetium (71) | Lu-177 | | $1x10^{-3}$ |
| Manganese (25) | Mn-52 | | $3x10^{-4}$ |
| | Mn-54 | | $1x10^{-3}$ |
| | Mn-56 | | $1x10^{-3}$ |
| Mercury (80) | Hg-197m | | $2x10^{-3}$ |
| | Hg-197 | | $3x10^{-3}$ |
| | Hg-203 | | $2x10^{-4}$ |
| Molybdenum (42) | Mo-99 | | $2x10^{-3}$ |
| Neodymium (60) | Nd-147 [Nd-149] | $6x10^{-4}$ | $[3x10^{-3}]$ |
| | Nd-149 [Nd-147] | $3x10^{-3}$ | $[6x10^{-4}]$ |
| Nickel (28) | Ni-65 | | $1x10^{-3}$ |
| Niobium (Columbium) (41) | Nb-95 | | $1x10^{-3}$ |
| | Nb-97 | | $9x10^{-3}$ |
| Osmium (76) | Os-185 | | $7x10^{-4}$ |
| | Os-191m | | $3x10^{-2}$ |
| | Os-191 | | $2x10^{-3}$ |
| | Os-193 | | $6x10^{-4}$ |
| Palladium (46) | Pd-103 | | $3x10^{-3}$ |
| | Pd-109 | | $9x10^{-4}$ |
| Phosphorus (15) | P-32 | | $2x10^{-4}$ |
| Platinum (78) | Pt-191 | | $1x10^{-3}$ |
| | Pt-193m | | $1x10^{-2}$ |
| | Pt-197m | | $1x10^{-2}$ |
| | Pt-197 | | $1x10^{-3}$ |
| [Polonium (84) | Po-210 | $2x10^{-10}$ | $7x10^{-6}$] |
| Potassium (19) | K-42 | | $3x10^{-3}$ |
| Praseodymium (59) | Pr-142 | | $3x10^{-4}$ |
| | Pr-143 | | $5x10^{-4}$ |
| Promethium (61) | Pm-147 | | $2x10^{-3}$ |
| | Pm 149 | | $4x10^{-4}$ |
| [Radium (88) | Ra-226 | $1x10^{-11}$ | $1x10^{-7}$] |
| | [Ra-228 | $2x10^{-11}$ | $3x10^{-7}$] |
| Rhenium (75) | Re-183 | | $6x10^{-3}$ |
| | Re-186 | | $9x10^{-4}$ |
| | Re-188 | | $6x10^{-4}$ |
| Rhodium (45) | Rh-103m | | $1x10^{-1}$ |
| | Rh-105 | | $1x10^{-3}$ |
| Rubidium (37) | Rb-86 | | $7x10^{-4}$ |
| Ruthenium (44) | Ru-97 | | $4x10^{-3}$ |
| | Ru-103 | | $8x10^{-4}$ |
| | Ru-105 | | $1x10^{-3}$ |
| | Ru-106 | | $1x10^{-4}$ |
| Samarium (62) | Sm-153 | | $8x10^{-4}$ |
| Scandium (21) | Sc-46 | | $4x10^{-4}$ |
| | Sc-47 | | $9x10^{-4}$ |
| | Sc-48 | | $3x10^{-4}$ |
| Selenium (34) | Se-75 | | $3x10^{-3}$ |
| Silicon (14) | Si-31 | | $9x10^{-3}$ |
| Silver (47) | Ag-105 | | $1x10^{-3}$ |
| | Ag-110m | | $3x10^{-4}$ |
| | Ag-111 | | $4x10^{-4}$ |
| Sodium (11) | Na-24 | | $2x10^{-3}$ |
| Strontium (38) | Sr-85 | | $1x10^{-3}$ |
| | Sr-89 | | $1x10^{-4}$ |
| | Sr-91 | | $7x10^{-4}$ |
| | Sr-92 | | $7x10^{-4}$ |
| Sulfur (16) | S-35 | $9x10^{-8}$ | $6x10^{-4}$ |
| Tantalum (73) | Ta-182 | | $4x10^{-4}$ |
| Technetium (43) | Tc-96m | | $1x10^{-1}$ |
| | Tc-96 | | $1x10^{-3}$ |
| Tellurium (52) | Te-125m | | $2x10^{-3}$ |
| | Te-127m | | $6x10^{-4}$ |
| | Te-127 | | $3x10^{-3}$ |
| | Te-129m | | $3x10^{-4}$ |
| | Te-131m | | $6x10^{-4}$ |
| | Te-132 | | $3x10^{-4}$ |
| Terbium (65) | Tb-160 | | $4x10^{-4}$ |
| Thallium (81) | Tl-200 | | $4x10^{-3}$ |
| | Tl-201 | | $3x10^{-3}$ |
| | Tl-202 | | $1x10^{-3}$ |
| | Tl-204 | | $1x10^{-3}$ |
| Thulium (69) | Tm-170 | | $5x10^{-4}$ |
| | Tm-171 | | $5x10^{-3}$ |
| Tin (50) | Sn-113 | | $9x10^{-4}$ |
| | Sn-125 | | $2x10^{-4}$ |
| Tungsten (Wolfram) (74) | W-181 | | $4x10^{-3}$ |
| | W-187 | | $7x10^{-4}$ |
| Vanadium (23) | V-48 | | $3x10^{-4}$ |
| Xenon (54) | Xe-131m | | $4x10^{-6}$ |
| | Xe-133 | | $3x10^{-6}$ |
| | Xe-135 | | $1x10^{-6}$ |
| Yttebium (70) | Yb-175 | | $1x10^{-3}$ |

| | | | |
|---|---|---|---|
| Yttrium (39) | Y-90 | | $2.10^{-4}$ |
| | Y-91m | | $3x10^{-2}$ |
| | Y-91 | | $3x10^{-4}$ |
| | Y-92 | | $6x10^{-4}$ |
| | Y-93 | | $3x10^{-4}$ |
| Zinc (30) | Zn-65 | | $1x10^{-3}$ |
| | Zn-69m | | $7x10^{-4}$ |
| | Zn-69 | | $2x10^{-2}$ |
| Zirconium (40) | Zr-95 | | $6x10^{-4}$ |
| | Zr-97 | | $2x10^{-4}$ |
| Beta or gamma emitting radioactive material not listed above with half-life less than 3 years. | | $1x10^{-10}$ | $1x10^{-6}$ |

Section 3. Special Cases. The following applies to the combination of nuclides: (1) In expressing the concentrations in Section 2 of this regulation, the activity stated is that of the parent nuclide and takes into account the daughters; and

(2) For purposes of 902 KAR 100:045, Section 3, where there is involved a combination of nuclides, the limit for the combination should be derived by determining for each nuclide in the product, the ratio between the radioactivity concentration present in the product and the exempt radioactivity concentration established in Section 2 of this regulation for the specific nuclide when not in combination. The sum of such ratios may not exceed "1" (i.e., "unity").

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

## CABINET FOR HUMAN RESOURCES
## Department for Health Services
## (Proposed Amendment)

### 902 KAR 100:090. Broad license limits.

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and to regulate the handling and disposal of radioactive waste. The purpose of this regulation is to provide a list of quantities of radioactive material which can be licensed under a "Type B" or "Type C" specific license of broad scope.

Section 1. Applicability. This regulation applies to all persons who have been approved to use radioactive material under a "Type B" or "Type C" specific license of broad scope.

Section 2. Table. The following lists provide the quantity limits for the issuance of a "Type B" or "Type C" specific license under broad scope as provided in the cabinet's regulation relating to the issuance of specific licenses:

LIMITS FOR BROAD LICENSES

| Radioactive Material | Col. I curies | Col. II curies |
|---|---|---|
| Antimony-122 | 1 | 0.01 |
| Antimony-124 | 1 | 0.01 |
| Antimony-125 | 1 | 0.01 |
| Arsenic-73 | 10 | 0.1 |
| Arsenic-74 | 1 | 0.01 |
| Arsenic-76 | 1 | 0.01 |
| Arsenic-77 | 10 | 0.1 |
| Barium-131 | 10 | 0.1 |
| Barium-140 | 1 | 0.01 |
| Beryllium-7 | 10 | 0.1 |
| Bismuth-210 | 0.1 | 0.001 |
| Bromine-82 | 10 | 0.1 |
| Cadmium-109 | 1 | 0.01 |
| Cadmium-115m | 1 | 0.01 |
| Cadmium-115 | 10 | 0.1 |
| Calcium-45 | 1 | 0.01 |
| Calcium-47 | 10 | 0.1 |
| Carbon-14 | 100 | 1. |
| Cerium-141 | 10 | 0.1 |
| Cerium-143 | 10 | 0.1 |
| Cerium-144 | 0.1 | 0.001 |

| | | |
|---|---|---|
| Cesium-131 | 100 | 1. |
| Cesium-134m | 100 | 1. |
| Cesium-134 | 0.1 | 0.001 |
| Cesium-135 | 1 | 0.01 |
| Cesium-136 | 10 | 0.1 |
| Cesium-137 | 0.1 | 0.001 |
| Chlorine-36 | 1 | 0.01 |
| Chlorine-38 | 100 | 1. |
| Chromium-51 | 100 | 1. |
| Cobalt-57 | 10 | 0.1 |
| Cobalt-58m | 100 | 1. |
| Cobalt-58 | 1 | 0.01 |
| Cobalt-60 | 0.1 | 0.001 |
| Copper-64 | 10 | 0.1 |
| Dysprosium-165 | 100 | 1. |
| Dysprosium-166 | 10 | 0.1 |
| Erbium-169 | 10 | 0.1 |
| Erbium-171 | 10 | 0.1 |
| Europium-152 (9.2h) | 10 | 0.1 |
| Europium-152 (13 yr.) | 0.1 | 0.001 |
| Europium-154 | 0.1 | 0.001 |
| Europium-155 | 1 | 0.01 |
| Fluorine-18 | 100 | 1. |
| Gadolinium-153 | 1 | 0.01 |
| Gadolinium-159 | 10 | 0.1 |
| Gallium-72 | 10 | 0.1 |
| Germanium-71 | 100 | 1. |
| Gold-198 | 10 | 0.1 |
| Gold-199 | 10 | 0.1 |
| Hafnium-181 | 1 | 0.01 |
| Holmium-166 | 10 | 0.1 |
| Hydrogen-3 | 100 | 1. |
| Indium-113m | 100 | 1. |
| Indium-114m | 1 | 0.01 |
| Indium-115m | 100 | 1. |
| Indium-115 | 1 | 0.01 |
| Iodine-125 | 0.1 | 0.001 |
| Iodine-126 | 0.1 | 0.001 |
| Iodine-129 | 0.1 | 0.001 |
| Iodine-131 | 0.1 | 0.001 |
| Iodine-132 | 10 | 0.1 |
| Iodine-133 | 1 | 0.01 |
| Iodine-134 | 10 | 0.1 |
| Iodine-135 | 1 | 0.01 |
| Iridium-192 | 1 | 0.01 |
| Iridium-194 | 10 | 0.1 |
| Iron-55 | 10 | 0.1 |
| Iron-59 | 1 | 0.01 |
| Krypton-85 | 100 | 1. |
| Krypton-87 | 10 | 0.1 |
| Lanthanum-140 | 1 | 0.01 |
| Lutetium-177 | 10 | 0.1 |
| Manganese-52 | 1 | 0.01 |
| Manganese-54 | 1 | 0.01 |
| Manganese-56 | 10 | 0.1 |
| Mercury-197m | 10 | 0.1 |
| Mercury-197 | 10 | 0.1 |
| Mercury-203 | 1 | 0.01 |
| Molybdenum-99 | 10 | 0.1 |
| Neodymium-147 | 10 | 0.1 |
| Neodymium-149 | 10 | 0.1 |
| Nickel-59 | 10 | 0.1 |
| Nickel-63 | 1 | 0.01 |
| Nickel-65 | 10 | 0.1 |
| Niobium-93m | 1 | 0.01 |
| Niobium-95 | 1 | 0.01 |
| Niobium-97 | 100 | 1. |
| Osmium-185 | 1 | 0.01 |
| Osmium-191m | 100 | 1. |
| Osmium-191 | 10 | 0.1 |
| Osmium-193 | 10 | 0.1 |
| Palladium-103 | 10 | 0.1 |
| Palladium-109 | 10 | 0.1 |
| Phosphorous-32 | 1 | 0 .01 |
| Platinum-191 | 10 | 0.1 |
| Platinum-193m | 100 | 1. |
| Platinum-193 | 10 | 0.1 |
| Platinum-197m | 100 | 1. |
| Platinum-197 | 10 | 0.1 |
| Polonium-210 | 0.01 | 0.0001 |
| Potassium-42 | 1 | 0.01 |
| Praseodymium-142 | 10 | 0.1 |
| Praseodymium-143 | 10 | 0.1 |
| Promethium-147 | 1 | 0.01 |
| Promethium-149 | 10 | 0.1 |
| Radium-226 | 0.01 | 0.0001 |
| Rhenium-186 | 10 | 0.1 |
| Rhenium-188 | 10 | 0.1 |
| Rhodium-103m | 1,000 | 10. |
| Rhodium-105 | 10 | 0.1 |
| Rubidium-86 | 1 | 0.01 |
| Rubidium-87 | 1 | 0.01 |
| Ruthenium-97 | 100 | 1. |
| Ruthenium-103 | 1 | 0.01 |
| Ruthenium-105 | 10 | 0.1 |
| Ruthenium-106 | 0.1 | 0.001 |
| Samarium-151 | 1 | 0.01 |
| Samarium-153 | 10 | 0.1 |
| Scandium-46 | 1 | 0.01 |
| Scandium-47 | 10 | 0.1 |
| Scandium-48 | 1 | 0.01 |
| Selenium-75 | 1 | 0.01 |
| Silicon-31 | 10 | 0.1 |
| Silver-105 | 1 | 0.01 |
| Silver-110m | 0.1 | 0.001 |
| Silver-111 | 10 | 0.1 |
| Sodium-22 | 0.1 | 0.001 |
| Sodium-24 | 1 | 0.01 |
| Strontium-85m | 1,000 | 10. |
| Strontium-85 | 1 | 0.01 |
| Strontium-89 | 1 | 0.01 |
| Strontium-90 | 0.01 | 0.0001 |
| Strontium-91 | 10 | 0.1 |
| Strontium-92 | 10 | 0.1 |
| Sulfur-35 | 10 | 0.1 |
| Tantalum-182 | 1 | 0.01 |
| Technetium-96 | 10 | 0.1 |
| Technetium-97m | 10 | 0.1 |
| Technetium-97 | 10 | 0.1 |
| Technetium-99m | 100 | 1. |
| Technetium-99 | 1 | 0.01 |
| Tellurium-125m | 1 | 0.01 |
| Tellurium-127m | 1 | 0.01 |
| Tellurium-127 | 10 | 0.1 |
| Tellurium-129m | 1 | 0.01 |
| Tellurium-129 | 100 | 1. |
| Tellurium-131m | 10 | 0.1 |
| Tellurium-132 | 1 | 0.01 |
| Terbium-160 | 1 | 0.01 |
| Thallium-200 | 10 | 0.1 |
| Thallium-201 | 10 | 0.1 |
| Thallium-202 | 10 | 0.1 |
| Thallium-204 | 1 | 0.01 |
| Thulium-170 | 1 | 0.01 |
| Thulium-171 | 1 | 0.01 |
| Tin-113 | 1 | 0.01 |
| Tin-125 | 1 | 0.01 |
| Tungsten-181 | 1 | 0.01 |
| Tungsten-185 | 1 | 0.01 |
| Tungsten-187 | 10 | 0.1 |
| Vanadium-48 | 1 | 0.01 |
| Xenon-131m | 1,000 | 10. |
| Xenon-133 | 100 | 1. |
| Xenon-135 | 100 | 1. |
| Ytterbium-175 | 10 | 0.1 |
| Yttrium-90 | 1 | 0.01 |
| Yttrium-91 | 1 | 0.01 |
| Yttrium-92 | 10 | 0.1 |
| Yttrium-93 | 1 | 0.01 |
| Zinc-65 | 1 | 0.01 |

| | | |
|---|---|---|
| Zinc-69m | 10 | 0.1 |
| Zinc-69 | 100 | 1. |
| Zirconium-93 | 1 | 0.01 |
| Zirconium-95 | 1 | 0.01 |
| Zirconium-97 | 1 | 0.01 |
| Any radioactive material other than source material, special nuclear material, or alpha emitting radioactive material not listed above. | 0.1 | 0.001 |

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

CABINET FOR HUMAN RESOURCES
Department for Health Services
(Proposed Amendment)

**902 KAR 100:095. Sealed sources.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. The purpose of this regulation is to provide requirements for the use of sealed radioactive sources in the healing arts and veterinary medicine.

Section 1. Applicability. The provisions of this regulation apply to all licensees who use sealed sources in the healing arts and veterinary medicine. The provisions of this regulation are in addition to, and not in substitution for, other applicable provisions of the cabinet's radiation regulations.

Section 2. Interstitial, Intracavitary and Superficial Applications. (1) Accountability, storage and transit:
(a) Except as otherwise specifically authorized by the cabinet, each licensee shall provide accountability of sealed sources and shall keep a permanent record of the issue and return of all sealed sources. A physical inventory shall be made at least every three (3) [six (6)] months and a written record of the inventory maintained. The record of the inventory shall include the quantities and kinds of radioactive material, location of sources and devices, and the date of the inventory.
(b) When not in use, sealed sources and applicators containing sealed sources shall be kept in a protective enclosure of such material and wall thickness as may be necessary to assure compliance with the provisions of 902 KAR 100:020.
(c) Each licensee shall follow the radiation safety and handling instructions approved by the cabinet, the U.S. Nuclear Regulatory Commission, or an Agreement State and furnished by the manufacturer on the label attached to the source, device, or permanent container thereof, or in the leaflet or brochure which accompanies the source or device, and maintain such instruction in a legible and conveniently available form.
(d) Each licensee shall assure that needles or standard medical applicator cells containing cobalt-60 as wire, radium-226, or cesium-137 are not opened while in the licensee's possession unless specifically authorized by a license issued by the cabinet.
(2) Testing sealed sources for leakage and contamination:
(a) All sealed sources, containing more than 100 microcuries of radioactive material with a half-life greater than thirty (30) days or ten (10) microcuries of radium-226, except iridium-192 seeds encased in nylon ribbon, [and in any form other than gas] shall be tested for leakage and/or contamination [prior to initial use and] at intervals not to exceed six (6) months or at such other intervals as are approved by the cabinet, U.S. Nuclear Regulatory

Commission or an Agreement State and described by the manufacturer on the label attached to the source, device, or permanent container thereof, or in the leaflet or brochure which accompanies the source or device. Each source or device shall be so tested prior to its first use unless the supplier furnishes a certificate that the source or device has been so tested within six (6) months of the transfer. If there is reason to suspect that a sealed source might have been damaged, or might be leaking, it shall be tested for leakage before further use.

(b)1. Leak tests shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample or, in the case of radium, the escape of radon at a rate of 0.001 microcurie per twenty-four (24) hours. The test sample shall be taken from the source or from the surfaces of the device in which the source is permanently or semipermanently mounted or stored on which one might expect contamination to accumulate.

2. Any leak test conducted which reveals the presence of 0.005 microcurie or more of removable contamination or, in the case of radium, the escape of radon at the rate of 0.001 microcurie or more for twenty-four (24) hours, shall be considered evidence that the sealed source is leaking. The licensee shall immediately withdraw the source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with applicable provisions of these regulations.

(c) Leak test results shall be recorded in units of [or] microcuries and maintained for inspection by the cabinet.

(3) Radiation Surveys:

(a) The maximum radiation level at a distance of one (1) meter from the patient in whom brachytherapy sources have been inserted shall be determined by measurement or calculation and preferably by both. This radiation level shall be entered on the patient's chart and signs posted as required by subsection (4) of this section.

(b) The radiation levels in the patient's room and the surrounding area shall be determined, recorded in millirem per hour, and records maintained for inspection by the cabinet.

(c) The licensee shall assure that patients treated with cobalt-60, cesium-137, iridium-192, or radium-226 implants remain hospitalized until a source count and radiation survey of the patient confirm that all implants have been removed.

(4) Signs and Records:

(a) Unless otherwise specifically exempted by the provisions of these regulations, the bed, cubical, or room of the hospital bachytherapy patient shall be marked with a sign indicating the presence of brachytherapy sources. This sign shall incorporate the radiation symbol and specify the radionuclide, the activity, date, and the individual(s) to contact for radiation safety instructions.

(b) The following information shall be included in the patient's chart:

1. The radionuclide administered, number of sources, activity in millicuries and time and date of administration;

2. The exposure rate of one (1) meter, the time the determination was made, and by whom;

3. The radiation symbol; and

4. The precautionary instructions necessary to assure that the exposure of individuals does not exceed that permitted under these regulations.

Section 3. Teletherapy. (1) Equipment:

(a) The housing shall be so constructed that, at one (1) meter from the source, the maximum exposure rate does not exceed ten (10) milliroentgens per hour when the beam control mechanism is in the "off" position. The average exposure rate measured at a representative number of points about the housing, each one (1) meter from the source, shall not exceed two (2) milliroentgens per hour.

(b) For teletherapy equipment installed after the effective date of these regulations, leakage radiation measured at one (1) meter from the source when the beam control mechanism is in the "on" position shall not exceed one (1) roentgen per hour or one-tenth (0.1) percent of the useful beam exposure rate.

(c) Adjustable or removable beam-defining mechanisms or devices shall allow transmission of not more than five (5) percent of the useful beam exposure rate.

(d) The beam control mechanism shall be of a positive design capable of acting in any position of the housing for which it is designed to be used. In addition to an automatic closing device, the mechanism shall be designed so that it can be manually returned to the "off" position with a minimum risk of exposure.

(e) The closing device shall be so designed as to return automatically to the "off" position in the event of any breakdown in interruption of the activating force and shall stay in the "off" position until activated from the control panel.

(f) When any door to the treatment room is opened, the beam control mechanism shall automatically and rapidly restore the unit to the "off" position and cause it to remain there until the unit is reactivated from the control panel.

(g) There shall be at the housing and at the control panel a warning device that plainly indicates whether the beam is "on" or "off."

(h) A written instruction shall be posted at the teletherapy machine control panel. This instruction shall inform the machine operator of the procedure to be followed should he be unable to turn the machine's primary beam of radiation "off" with the controls outside the treatment room. These instructions shall caution individuals to avoid exposure to the primary beam of radiation when in the treatment room and shall include specific instructions for:

1. Locating and using the device for the manually turning off the teletherapy unit's primary beam of radiation;

2. Removing the patient from the treatment room;

3. Securing the room against unauthorized entry; and

4. Notifying the responsible physician or radiation safety officer.

(i) The equipment shall be provided with a locking device to prevent unauthorized use.

(j) The control panel shall be provided with a timer that automatically terminates the exposure after a preset time.

(k) Teletherapy sources shall be tested for leakage and contamination in accordance with procedures described in Section 2(2) of this regulation. The tests for leakage may be made by wiping accessible surfaces of the housing port or beam defining mechanism or device while the source is in the "off" position and measuring

these wipes for transferred contamination.
(1) Provisions shall be made to permit continuous observation of the patients during irradiation.
(2) Shielding:
(a) Primary protective barriers shall be provided for any area that the useful beam may strike when using the largest possible diaphragm opening. Such barriers should extend at least one (1) foot beyond the useful beam for any possible orientation.
(b) Secondary protective barriers shall be provided for all occupied areas exposed to leakage and scattered radiation.
[(c) Provision shall be made to permit continuous observation of patients during irradiation.]
(3) Operation: No individual who is occupationally exposed to radiation shall be in the treatment room during irradiation unless he is the patient. No other individual shall be there except when it is clinically necessary, and such individual shall be adequately protected and shall be positioned so that no part of his body will be struck by the useful beam and so that his body is as far as possible from the edge of the useful beam. The exposure of the individual shall be monitored.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

## CABINET FOR HUMAN RESOURCES
## Department for Health Services
## (Proposed Amendment)

### 902 KAR 100:100. Industrial radiography.

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. The purpose of this regulation is to provide radiation safety requirements for industrial radiographic operations.

Section 1. Applicability. The requirements of this regulation apply to all licensees or registrants who use sources of radiation for industrial radiography. The requirements of this regulation are in addition to, and not in substitution for, other requirements of the Cabinet for Human Resources radiation regulations.

Section 2. Limits on Levels of Radiation for Radiographic Exposure Devices and Storage Containers. Radiographic exposure devices measuring less than four (4) inches (i.e., ten (10) centimeters) from the sealed source storage position to any exterior surface of the device shall have no radiation level in excess of fifty (50) milliroentgens per hour at six (6) inches (i.e., fifteen (15) centimeters) from any exterior surface of the device. Radiographic exposure devices measuring a minimum of four (4) inches from the sealed source storage position to any exterior surface of the device, and all storage containers for sealed sources or outer containers for radiographic exposure devices shall have no radiation level in excess of 200 milliroentgens per hour at any exterior surface and ten (10) mR/hr at 39.4 inches (i.e., one (1) meter from any exterior surface. The radiation levels specified are with the sealed source in the shielded (i.e., "off") position.

Section 3. Locking of Sources of Radiation. (1) Each source of radiation shall be provided with a lock or outer locked container designed to prevent unauthorized or accidental production of radiation or removal or exposure of a sealed source and shall be kept locked at all times except when under the direct surveillance of a radiographer or radiographer's assistant, or as may be otherwise authorized by these regulations. Each storage container and source changer likewise shall be provided with a lock and shall be kept locked when containing sealed

sources except when the container is under the direct surveillance of a radiographer or radiographer's assistant.

(2) Radiographic exposure devices, source changers, and storage containers, prior to being [when] moved from one (1) location to another, and also prior to being secured at a given location, shall be locked and surveyed to assure that the sealed source is in the shielded position.

Section 4. Storage Precautions. Locked radiographic exposure devices, source changers, storage containers and other sources of radiation shall be physically secured to prevent tampering or removal by unauthorized personnel.

Section 5. Radiation Survey Instruments. The licensee or registrant shall maintain sufficient calibrated and operable radiation survey instruments to make physical radiation surveys as required by these regulations. Each radiation survey instrument shall be calibrated against appropriate energy and radiation fields at intervals not to exceed three (3) months and after each instrument servicing such that accuracy within plus or minus twenty (20) percent can be demonstrated at two (2) or more widely separated points, other than zero (0), on each scale. A record shall be maintained of the date of calibration for two (2) years after the calibration date for inspection by the cabinet. Instrumentation required by this section shall have a range such that two (2) milliroentgens per hour through one (1) roentgen per hour can be measured.

Section 6. Leak Testing, Repair, Tagging, Opening, Modification, and Replacement of Sealed Sources. (1) The replacement of any sealed source fastened to or contained in a radiographic exposure device, and leak testing, repair, tagging, opening, or any other modification of any sealed source shall be performed only by persons specifically authorized to do so by the cabinet, the United States Nuclear Regulatory Commission, or any Agreement State.

(2) Each sealed source shall be tested for leakage and contamination in accordance with 902 KAR 100:060 [these regulations]. Records of leakage and contamination shall be maintained for two (2) years.

(3) A sealed source which is not fastened to or contained in a radiographic exposure device shall have permanently attached to it a durable tag at least one (1) inch square bearing the prescribed radiation caution symbol in conventional colors, magenta or purple on a yellow background, and at least the instructions: "Danger--Radioactive Material--Do Not Handle--Notify Civil Authorities if Found."

Section 7. Quarterly Inventory. Each licensee or registrant shall conduct a quarterly physical inventory to account for all sources of radiation received or possessed by him. The records of the inventories shall be maintained for two (2) years from the date of the inventory for inspection by the cabinet and shall include the quantities and kinds of radioactive material or rate power, manufacturer, and identifying number of radiation machines, the location of all sources of radiation, and the date of the inventory.

Section 8. Utilization Logs. Each licensee or registrant shall maintain current logs, which shall be kept available for inspection by the cabinet for two (2) years from the date of the recorded event, at the address specified in the license or on the registration, showing for each source of radiation the following information:

(1) A description (or make and model number) of each source of radiation or storage container in which a sealed source is located;

(2) The identity of the radiographer to whom assigned; [and]

(3) The site where used and dates of use; and

(4) The voltage and current, where applicable, and exposure time for each radiographic exposure employing a source of radiation.

Section 9. Inspection and Maintenance of Radiographic Exposure Devices, Storage Containers, and Other Sources of Radiation. (1) Each licensee or registrant shall ensure that checks for obvious defects in radiation machines, radiographic exposure devices, storage containers, and source changers are performed prior to each day of use. [Each licensee or registrant shall conduct a program for inspection and maintenance of radiographic exposure devices, storage containers, and other sources of radiation to assure proper functioning of components important to safety.]

(2) Each licensee or registrant shall conduct a program of at least quarterly inspection and maintenance of radiation machines, radiographic exposure devices, storage containers, and source changers to assure proper functioning of components important to safety. All appropriate parts shall be maintained in accordance with manufacturer's specifications.

(3) If any inspection conducted pursuant to this section reveals damage to components critical to radiation safety, the device shall be removed from service until rapairs have been made.

(4) [(2)] Records of such inspection and maintenance shall be kept for two (2) years for inspection by the cabinet.

Section 10. Training and Testing of Radiographers and Radiographer's Assistants [Limitations]. (1) No licensee or registrant shall permit any individual [person] to act as a radiographer as defined in 902 KAR 100:010 [these regulations] until such individual [person]:

(a) Has been instructed in the subjects outlined in Section 17 of this regulation [and shall have demonstrated understanding thereof];

(b) Has received copies of and demonstrated an understanding of the following:

1. The requirements contained in this regulation;

2. Other applicable provisions of these regulations;

3. The conditions of the license or registration certificate issued by the cabinet; and

4. The licensee's or registrant's approved operating an emergency procedures; [and]

(c) Has demonstrated competence to use the sources of radiation, related handling tools, and survey instruments which will be employed at his assignment; and [.]

(d) Has successfully demonstrated an understanding of the instructions in this subsection by successful completion of a written

test and a field examination on the subjects covered.

(2) No licensee or registrant shall permit any individual [person] to act as a radiographer's assistant as defined in 902 KAR 100:010 [this regulation] until such individual [person]:

(a) Has received copies of and instructions in the licensee's or registrant's approved operating and emergency procedures[, and has demonstrated understanding thereof]; [and,]

(b) Has demonstrated competence to use, under the personal supervision of the radiographer, the sources of radiation, radiographic exposure devices, related handling tools, and radiation survey instruments which will be employed in his assignment; and [.]

(c) Has successfully demonstrated an understanding of the instructions in this subsection by written or oral test and field examination on the subjects covered.

(3) Each licensee or registrant shall maintain records of training and testing which demonstrate that the requirements of subsections (1) and (2) of this section are met for inspection by the cabinet for three (3) years following termination of employment.

Section 11. Operating and Emergency Procedures. Each licensee's or registrant's operating and emergency procedures shall include instructions in at least the following:

(1) The handling and use of sources of radiation to be employed such that no individual [person] is likely to be exposed to radiation doses in excess of the limits established in 902 KAR 100:020 [these regulations].

(2) Methods and occasions for conducting radiation surveys;

(3) Methods for controlling access to radiographic areas;

(4) Methods and occasions for locking and securing sources of radiation;

(5) Personnel monitoring and the use of personnel monitoring equipment including steps that must be taken immediately by radiography personnel in the event a pocket dosimeter is found to be off scale; [.]

(6) Transportation to field locations, including packing of sources of radiation in vehicles, posting of vehicles, and control of sources of radiation during transportation;

(7) Minimizing exposure of individuals [persons] in the event of an accident;

(8) The procedure for notifying proper persons in the event of an accident;

(9) Maintenance of records; and

(10) The inspection and maintenance of radiographic exposure devices, source changers, storage containers, and other sources of radiation.

Section 12. Personnel Monitoring Control. (1) No licensee or registrant shall permit any individual [person] to act as a radiographer or as a radiographer's assistant unless, at all times during radiographic operations, each such individual [person] wears a direct reading pocket dosimeter and either a film badge or a thermoluminescent dosimeter. Pocket dosimeters shall have a range from zero to at least 200 milliroentgens and shall be recharged daily or at the start of each shift. Each [A] film badge or thermoluminescent dosimeter shall be assigned to and worn by only one (1) individual [person].

(2) Pocket dosimeters shall be read and exposures recorded at least once daily. A film badge or thermoluminescent dosimeter shall be immediately processed if a pocket dosimeter is discharged beyond its range. The reports received from the film badge or thermoluminescent dosimeter processor shall be kept for inspection until the cabinet authorizes their disposal. [and] Records of daily pocket dosimeter readings shall be kept for two (2) years [maintained for inspection by the cabinet].

(3) Pocket dosimeters shall be checked for correct response to radiation at periods not to exceed one (1) year. Acceptable dosimeters shall read within plus or minus thirty (30) percent of the true radiation exposure.

(4) [(3)] The requirements for use of personnel monitoring as specified in subsections (1) and (2) of this section shall not apply in industrial radiography utilizing sources of machine radiation in cabinet x-ray systems which are equipped with interlocks such that the source of radiation will not produce an exposure radiation field unless all openings are securely closed and which is so shielded that every location on the exterior meets conditions for an uncontrolled area.

(5) [(4)] Upon application the cabinet may authorize methods of personnel dosimetry other than film badges or thermoluminescent dosimetry.

Section 13. Documents Required at Temporary Job Sites. Each licensee or registrant conducting industrial radiography at a temporary site shall have the following records available at that site for inspection by the cabinet;

(1) A copy of the operating and emergency procedures;

(2) A current copy of the radioactive material license or registration certificate;

(3) Applicable regulations;

(4) Survey records required pursuant to Section 18 of this regulation for the period of operation at the site;

(5) Daily pocket dosimeter records for the period of operation at the site; and

(6) The latest instrument calibration and leak test record for specific devices in use at the site. Acceptable records include tags or labels which are affixed to the device or survey meter.

Section 14. Security. During each radiographic operation, the radiographer or radiographer's assistant shall maintain a direct surveillance of the operation to protect against unauthorized entry into a high radiation area, except:

(1) Where the high radiation area is equipped with a control device or an alarm system, or

(2) Where the high radiation area is locked to protect against unauthorized or accidental entry.

Section 15. Posting. Notwithstanding any provisions of 902 KAR 100:020, Section 13 [Except as otherwise specifically exempted in these regulations], areas in which radiography is being performed shall be conspicuously posted as required in 902 KAR 100:020.

Section 16. Special Requirements and Exemptions for Cabinet X-ray Systems. (1) Except as provided by Section 12(4) [(3)] of this regulation, registrants using cabinet x-ray systems are exempt from the requirements of this regulation.

(2) Cabinet x-ray systems shall meet the requirements of 902 KAR 100:145, relating to

cabinet x-ray systems.

Section 17. Minimum Training Requirements for Industrial Radiographers. All industrial radiographers shall receive minimum training in the following areas: (1) Fundamentals of radiation safety:

(a) Characteristics of radiation [gamma, neutron, and X-radiation].

(b) Units of radiation dose [(mrem)] and quantity of radioactivity [(curie)].

(c) Significance of radiation dose [Hazards of excessive exposure of radiation].

(d) Levels of radiation from sources of radiation.

(e) Methods of controlling radiation dose:

1. Working time,
2. Working distances,
3. Shielding.

(2) Radiation detection instrumentation to be used:

(a) Use of radiation survey instruments:

1. Operation,
2. Calibration,
3. Limitations.

(b) Survey techniques.

(c) Use of personnel monitoring equipment:

1. Film badges,
2. Pocket dosimeters,
3. Thermoluminescent dosimeters.

(3) Radiographic equipment to be used:

(a) Remote handling equipment,

(b) Radiographic exposure devices and sealed sources,

(c) Storage containers,

(d) Operation and control of x-ray equipment.

(4) The requirements of pertinent federal and state regulations; [and]

(5) The licensee's or registrant's written operating and emergency procedures; and

(6) Case histories of radiography accidents.

Section 18. Radiation Surveys and Survey Records. (1) No radiographic operation shall be conducted unless calibrated and operable radiation survey instrumentation, as described in Section 5 of this regulation, is available and used at each site where radiographic exposures are made.

(2) A physical radiation survey shall be made after each radiographic exposure utilizing radiographic exposure devices or sealed sources or radioactive material to determine that the sealed source has been returned to its shielded condition. The entire circumference of the radiographic exposure device shall be surveyed. If the radiographic exposure device has a source guide tube, the survey shall also include the guide tube.

(3) A physical radiation survey shall be made to determine that each sealed source is in its shielded condition prior to securing the radiographic exposure device or storage container.

(4) A physical radiation survey shall be made after each radiographic exposure using radiographic machines to determine that the machine is "off" [Records shall be kept of surveys and maintained for inspection by the cabinet].

(5) Records shall be kept of surveys and maintained for inspection by the cabinet for two (2) years after completion of the survey unless the survey was used to determine an individual exposure.

Section 19. Required Administrative Procedures for Industrial Radiography Program. (1) Licensees and registrants shall have an adequate program for training radiographers and radiographer's assistants and submit to the cabinet a schedule or description of such program which specifies the:

(a) Initial training;

(b) Periodic training;

(c) On-the-job training;

(d) Means to be used by the licensee or registrant to determine the radiographer's knowledge and understanding of and ability to comply with cabinet regulations and licensing requirements, and the licensee's or registrant's operating and emergency procedures; and

(e) Means to be used by the licensee or registrant to determine the radiographer's assistant's knowledge and understanding of and ability to comply with the licensee's or registrant's operating and emergency procedures.

(2) The licensee or registrant shall establish and submit to the cabinet satisfactory written operating and emergency procedures.

(3) The licensee or registrant shall have and submit details of an adequate internal audit [inspection] system, or other management control, to assure that license provisions, regulations, and the licensee's or registrant's operating and emergency procedures are followed by radiographers and radiographers' assistants. Such inspections shall be at intervals not to exceed three (3) months and each radiographer shall be audited annually. Records of internal audits shall be maintained for inspection by the cabinet for two (2) years from the date of the audit.

(4) The licensee or registrant shall submit to the cabinet a description of his overall organizational structure pertaining to the radiography program, including specified delegations of authority and responsibility for operation of the program.

(5) The licensee who desires to conduct his own leak test shall establish adequate procedures to be followed in leak testing sealed sources for possible leakage and contamination and shall submit to the cabinet a description of such procedures including:

(a) Instrumentation to be used;

(b) Method of performing tests (e.g., points on equipment to be smeared and method of taking smear); and

(c) Pertinent experience of the person who will perform the test.

Section 20. Field X-Ray Radiographic Operations. In addition to the applicable requirements of this regulation, x-ray machines in field operations shall also meet the requirements of 902 KAR 100:105, relating to the use and operation of x-ray machines.

Section 21. Inspection and Maintenance of High Radiation Area Control Devices or Alarm Systems. For any high radiation area equipped with a control device or alarm system as described in 902 KAR 100:020, the control device or alarm system shall be tested for proper operation at the beginning of each period of use [intervals not to exceed three (3) months]. Records of such tests shall be maintained for inspection by the cabinet for two (2) years.

Section 22. Personal Supervision of

Radiographer's Assistant. Whenever a radiographer's assistant uses radiographic exposure devices, sealed sources or related source handling tools, or conducts radiation surveys required by Section 18 of this regulation to determine that the sealed source has returned to the shielded position after an exposure, the radiographer shall be physically present at the site where sources of radiation and associated equipment are being used, watching the performance of the radiographer's assistant and in such proximity that immediate assistance can be given if required.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

## CABINET FOR HUMAN RESOURCES
## Department for Health Services
## (Proposed Amendment)

### 902 KAR 100:142. Wireline service operations.

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. The purpose of this regulation is to provide radiation safety requirements for persons using sources of radiation for wireline service operations including radioactive markers, mineral exploration and subsurface tracer studies.

Section 1. Applicability. The requirements in this regulation apply to all licensees or registrants who use sources of radiation for wireline service operations including radioactive markers, mineral exploration and subsurface tracer studies.

Section 2. Prohibition. No licensee shall perform wireline service operations with a sealed source(s) in any well or wellbore unless, prior to commencement of the operation, the licensee has a written agreement with the well operator, well [owner] or land owner, drilling contractor [as appropriate,] that:
(1) In the event a sealed source is lodged [lost] downhole, a reasonable effort at recovery will be made.
(2) In the event a decision is made to abandon the sealed source downhole, the requirements of this regulation shall be met.

Section 3. Limits on Level of Radiation. Radioactive materials shall be used, stored, and transported in such a manner that the requirements of 902 KAR 100:020 and 902 KAR 100:070 as applicable, are met.

Section 4. Storage Precautions. (1) Each source of radiation, except accelerators, shall be provided with a lockable storage and/or transport container. The container shall be provided with a lock (or tamper seal for calibration sources) to prevent unauthorized removal of, or exposure to, the source of radiation.
(2) Sources of radiation shall be stored in a manner which will minimize the danger from explosion or fire.

Section 5. Transport Precautions. Transport containers shall be physically secured to the transporting vehicle to prevent accidental loss, tampering or unauthorized removal.

Section 6. Radiation Survey Instruments. (1) The licensee or registrant shall maintain sufficient calibrated and operable radiation survey instruments at each field station to make physical radiation surveys as required by this regulation and by 902 KAR 100:020. Instrumentation required by this section [part] shall be capable of measuring [have a range of at least] 0.1 milliroentgen per hour through at least fifty (50) [twenty (20)] milliroentgens

per hour.
(2) Each radiation survey instrument shall be calibrated:
(a) At intervals not to exceed six (6) months and after each instrument servicing;
(b) At energies and exposure levels appropriate for use; and
(c) Such that accuracy within plus or minus twenty (20) percent of the true radiation level can be demonstrated on each scale.
(3) Records of calibration shall be maintained for a period of two (2) years for inspection by the cabinet.

Section 7. Leak Testing of Sealed Sources. Sealed sources of radioactive material shall be tested for leakage and contamination in accordance with 902 KAR 100:060 [and 902 KAR 100:095].

Section 8. Quarterly Inventory. Each licensee or registrant shall conduct a quarterly physical inventory to account for all sources of radiation[, except tracer materials,] received or possessed by him. Records of inventories shall be maintained for two (2) years from the date of the inventory for inspection by the cabinet and shall include the quantities and kinds of sources of radiation, the location where sources of radiation are assigned, the date of the inventory, and the name of the individual conducting the inventory.

Section 9. Utilization Records. Each licensee or registrant shall maintain current records, which shall be kept available for inspection by the cabinet for two (2) years from the date of the recorded event showing the following information for each source of radiation:
(1) A description (or make and model number or serial number) of each source of radiation used;
(2) The identity of the individual or [of] field unit to whom assigned;
(3) Locations where used and dates of use; and
(4) In the case of tracer materials and radioactive markers, the utilization record shall also indicate the radionuclide and activity [of radioactive materials] used at a particular well site.

Section 10. Design and Performance Criteria for Sealed Sources Used in Downhole Operations. (1) [After January 1, 1980,] Each sealed source, except those containing radioactive material in gaseous form, used in downhole operations shall, as a minimum, meet the following criteria:
(a) Be of double encapsulated construction;
(b) Contain radioactive material whose chemical and [or] physical form are [is] as insoluble and non-dispersible as practicable; and
(c) Have been individually pressure tested to 25,000 pounds per square inch absolute without failure.
(2) For sealed sources, except those containing radioactive material in gaseous form [manufactured after the effective date of this regulation], in the absence of a certificate from a transferor certifying that an individual sealed source meets the above criteria, the sealed source shall not be put into use until such determinations and testing have been performed.
(3) Each sealed source, except those containing radioactive material in gaseous form, used in downhole operations, shall be certified by the manufacturer, or other testing organization acceptable to the cabinet, as meeting the sealed source performance requirements for oil well-logging as contained in the American National Standard N542, "Sealed Radioactive Sources, Classification."
(4) [(3)] Certification documents shall be maintained for inspection by the cabinet for a period of two (2) years after source disposal. [except] For sources abandoned downhole, [in which case] such documents shall be maintained until their disposal is authorized by the cabinet.

Section 11. Labeling. (1) Each source, source holder, or logging tool containing radioactive material shall bear a durable, legible, and clearly visible marking or label which has, as a minimum, the standard radiation symbol without color requirement and the following wording: DANGER (or CAUTION) RADIOACTIVE [Do not handle. Notify civil authorities (or name of company)]. This labeling shall be on the smallest component, (i.e., source, source holder, or logging tool), that is transported as a separate piece of equipment.
(2) Each transport container shall have permanently attached to it a durable legible and clearly visible label which has, as a minimum, the standard radiation symbol and the following wording: DANGER (or CAUTION) RADIOACTIVE. Notify civil authorities (or name of company) if found.

Section 12. Inspection and Maintenance. (1) Each licensee or registrant shall conduct, at intervals not to exceed six (6) months, a program of inspection of sealed sources and inspection and maintenance of source holders, logging tools, source handling tools, storage containers, transport containers, and injection tools to assure proper labeling, operation, and physical condition. Records of inspection and maintenance shall be maintained for a period of two (2) years for inspection by the cabinet.
(2) If any inspection conducted pursuant to this section reveals damage to labeling or components critical to radiation safety, the device shall be removed from service until repairs have been made.
(3) The repair, opening, or any other modification of any sealed source shall be performed only by persons specifically authorized to do so by the cabinet, the U. S. Nuclear Regulatory Commission, or an [another] agreement state.

Section 13. Training Requirements. (1) No licensee or registrant shall permit any individual to act as a logging supervisor [engineer] until such individual:
(a) Has successfully completed a course recognized by the cabinet, an [another] agreement state, or the U. S. Nuclear Regulatory Commission, covering the subjects outlined in Section 24 of this regulation and shall have demonstrated an understanding thereof;
(b) Has received copies of and demonstrated an understanding of the following:
1. The requirements contained in this regulation;
2. Other applicable provisions of the cabinet's radiation regulations;
3. The conditions of the license or registration certificate issued by the cabinet; and

4. The licensee's or registrant's approved operating and emergency procedures; and

(c) Has demonstrated competence to use sources of radiation, related handling tools and radiation survey instruments which will be employed in his assignment.

(2) No licensee or registrant shall permit any individual to assist in the handling of sources of radiation until such individual:

(a) Has read and received instruction in the licensee's or registrant's operating and emergency procedures and shall have demonstrated understanding thereof; and

(b) Has demonstrated competence to use, under the personal supervision of the logging supervisor [engineer], the sources of radiation, related handling tools and radiation survey instruments which will be employed in his assignment.

(3) Each licensee or registrant shall maintain employee training records, for inspection by the cabinet for two (2) years following termination of employment[, and until it authorizes their disposal, records of training and testing which demonstrates that the requirements of this section are met].

Section 14. Operating and Emergency Procedures. The licensee's or registrant's operating and emergency procedures shall include instructions in at least the following:

(1) The handling and use of sources of radiation to be employed such that no individual is likely to be exposed to radiation doses in excess of the limits established in 902 KAR 100:020;

(2) Methods and occasions for conducting radiation surveys;

(3) Methods and occasions for locking and securing sources of radiation;

(4) Personnel monitoring and the use of personnel monitoring equipment;

(5) Transportation to temporary job sites and field stations [locations], including packaging [packing] of sources of radiation in the vehicles, placarding [posting] of vehicles and securing of sources of radiation during transportation;

(6) Minimizing exposure of individuals in the event of an accident;

(7) The procedure for notifying proper personnel in the event of an accident;

(8) Maintenance of records;

(9) The inspection of sealed sources and the inspection and maintenance of source holders, logging tools, source handling tools, storage containers, transport containers, and injection tools;

(10) The procedures to be followed in the event a sealed source is lodged [lost] downhole; and

(11) The procedures to be used for picking up, receiving, and opening packages containing radioactive material.

Section 15. Personnel Monitoring. (1) No licensee or registrant shall permit any individual to act as a logging supervisor [engineer] or to assist [assistant] in the handling of sources of radiation unless each such individual wears either a film badge or a thermoluminescent dosimeter (TLD) at all times during well service operations utilizing sources of radiation. Each film badge or thermoluminescent dosimeter (TLD) shall be assigned to and worn by only one (1) individual.

(2) Personnel monitoring records shall be maintained for inspection by the cabinet until it authorizes their disposal.

Section 16. Security. During each logging or tracer application, the logging supervisor [engineer] or other designated employee shall maintain direct surveillance of the operation to protect against unauthorized or unnecessary entry into a restricted area.

Section 17. Handling Tools. The licensee shall provide and require the use of tools that will assure remote handling of sealed sources other than low activity calibration sources.

Section 18. Tracer Studies. (1) Protective gloves and other appropriate protective clothing[, as appropriate,] shall be used by all personnel handling radioactive tracer material. Care shall be taken to avoid ingestion or inhalation of radioactive material.

(2) No licensee shall permit injection of radioactive material into potable aquifers without prior authorization from the cabinet.

Section 19. Particle Accelerators. No licensee or registrant shall permit above-ground testing of particle accelerators which results in the production of radiation except in areas or facilities controlled or shielded so that the requirements of 902 KAR 100:020 are met.

Section 20. Radiation Surveys. (1) Radiation surveys or calculations shall be made and recorded of each area where radioactive materials are stored.

(2) Radiation surveys or calculations shall be made and recorded of the radiation levels in occupied positions and on the exterior of each vehicle used to transport radioactive materials. Such surveys or calculations shall include each source of radiation and combination of sources of radiation transported in the vehicle.

(3) After removal of the sealed source from the logging tool and before departing the job site, the logging tool detector shall be energized, or a survey meter used, to assure that the logging tool is free of contamination.

(4) [(3)] Radiation surveys shall be made and recorded at the job site or well head for [of] each tracer operation [and of each logging operation utilizing sealed sources not meeting the sealed source design and performance criteria specified in Section 10 (]except for those using Hydrogen 3, Carbon-14, and Sulfur-35[)]. At tracer jobs, a radiation survey instrument shall be used. Such surveys shall include radiation levels prior to and after the operation.

(5) [(4)] Records required pursuant to this section, shall [be in units of millirem per hour and] include the dates, the identification of individual(s) making the survey, [record, a unique] identification of survey instrument(s) used and an exact description of the location of the survey. Records of these surveys shall be maintained for inspection by the cabinet for two (2) years after completion of the survey.

Section 21. Records Required at Field Stations. Each licensee or registrant maintaining field stations from which well service operations are conducted shall have

copies of the following records available at each station for inspection by the cabinet:
(1) Appropriate license or certificate of registration;
(2) Operating and emergency procedures;
(3) Applicable regulations;
(4) Survey records required pursuant to Section 20 of this regulation;
(5) Quarterly inventories required pursuant to Section 8 of this regulation;
(6) Utilization records required pursuant to Section 9 of this regulation;
(7) Records of inspection and maintenance required pursuant to Section 12 of this regulation;
(8) Records of the latest survey instrument calibration pursuant to Section 6 of this regulation [and leak test for the specific devices and sources at the field station].
(9) Records of the latest leak test results pursuant to Section 7 of this regulation.

Section 22. Records Required at Temporary Job Sites. (1) Each licensee or registrant conducting well service operations at a temporary job site shall have the following records available at that site for inspection by the cabinet:
(a) Operating and emergency procedures;
(b) Survey records required pursuant to Section 20 of this regulation for the period of operation at the site; and
(c) Evidence of current calibration for the radiation survey instruments in use at the site.
(2) In addition to the record requirements of this section, at each temporary job site where well service operations are being conducted under cabinet authorization granted pursuant to 902 KAR 100:065, the following records shall be available for inspection by the cabinet:
(a) Current leak test records for the sealed sources in use at the site; and
(b) The appropriate license, certification of registration or equivalent document.

Section 23. Notification of Incidents and Lost Sources. (1) Notification of incidents and sources lost in other than downhole logging operations shall be made in accordance with appropriate provisions of 902 KAR 100:020, Section 16 [the cabinet's radiation regulations].
(2) Whenever a sealed source or device containing radioactive material is lodged downhole, the licensee shall: [Whenever it appears that a sealed source or device containing radioactive material lost downhole may not be recovered, the licensee shall notify the cabinet by telephone or telegraph, giving the circumstances of the loss. The licensee shall propose a method of abandonment of the source(s) for approval by the cabinet and a letter of confirmation shall follow within thirty (30) days of abandonment.]
(a) Monitor at the surface for the presence of radioactive contamination with a radiation survey instrument or logging tool during logging tool recovery operations; and
(b) Notify the cabinet immediately by telephone if radioactive contamination is detected at the surface or if the source appears to be damaged.
(3) When it becomes apparent that efforts to recover the radioactive source will not be successful, the licensee shall:
(a) Advise the well-operator of the regulations regarding abandonment and an appropriate method of abandonment which shall include:
1. [(a)] The immobilization and sealing in place of the radioactive source with a cement plug;
2. [(b)] The setting of a whipstock or other deflection device; and
3. [(c)] The mounting of a permanent identification plaque, containing information required by this section, at the surface of the well.
(b) Notify the cabinet by telephone, giving the circumstances of the loss, and request approval of the proposed abandonment procedures; and
(c) File a written report with the cabinet within thirty (30) days of the abandonment, setting forth the following information:
1. Date of occurrence and a brief description of attempts to recover the source;
2. Description of the radioactive source involved, including radionuclide, quantity, and chemical and physical form;
3. Surface location and identification of well;
4. Results of efforts to immobilize and set the source in place;
5. Depth of the radioactive source;
6. Depth of the top of the cement plug;
7. Depth of the well; and
8. Information contained on the permanent identification plaque.
(4) Whenever a sealed source containing radioactive material is abandoned downhole, the licensee shall provide a permanent plaque for posting the well or wellbore. This plaque shall:
(a) Be constructed of long-lasting material such as stainless steel[, brass, bronze] or monel. The size of the plaque should be convenient for use on active or inactive wells; e.g., a seven (7) inch square. Letter size of the word "Caution" should be approximately twice the letter size of the rest of the information; e.g., one-half (1/2) inch and one-fourth (1/4) inch letter size, respectively.
(b) Contain the following engraved information on its face:
1. The word "Caution;"
2. The radiation symbol (color not required);
3. The date of abandonment;
4. The name of the well operator;
5. The well name and well identification number(s) or other designation;
6. The sealed source(s) by radionuclide, and quantity of activity;
7. The source depth, and the depth to the top of the plug [back depth];
8. An appropriate warning, depending on the specific circumstances of each abandonment, such as "Do not drill below plug depth;" or "Do not enlarge casing;" and
9. The words "Do not re-enter hole before contacting [the] Radiation Control [Branch], Kentucky Cabinet for Human Resources."
(c) The licensee shall immediately notify the cabinet by telephone and subsequently by confirming letter if the licensee knows or has reason to believe that radioactive material has been lost in or to an underground potable water source. Such notice shall designate the well location and shall describe the magnitude and extent of loss of radioactive material, assess the consequences of such loss, and explain efforts planned or being taken to mitigate consequences. [Be welded or bolted to the

well-head structure.]

Section 24. Minimum Training Requirements for Logging Supervisors [Engineers]. All logging supervisors [engineers] shall receive minimum training in the following areas:
(1) Fundamentals of radiation safety:
(a) Characteristics of gamma, neutron and x-radiation;
(b) Units of radiation dose (mrem) and quantity of radioactivity (curie); and
(c) Significance of radiation dose:
1. Radiation protection standards, and
2. Biological effects of radiation dose.
(d) Levels of radiation from sources of radiation.
(e) Methods of controlling radiation dose:
1. Working time,
2. Working distance, and
3. Shielding.
(2) Radiation detection instrumentation to be used:
(a) Use of radiation survey instruments:
1. Operation,
2. Calibration, and
3. Limitations.
(b) Survey techniques.
(c) Use of personnel monitoring equipment.
(3) Equipment to be used:
(a) Remote handling equipment.
(b) Sources of radiation.
(c) Storage and transport containers.
(d) Operation and control of equipment.
(4) The requirements of pertinent federal and state regulations.
(5) The licensee's or registrant's written operating and emergency procedures.
(6) The licensee's or registrant's recordkeeping procedures.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

## CABINET FOR HUMAN RESOURCES
## Department for Health Services
## (Proposed Amendment)

**902 KAR 100:165. Notices, reports and instructions to employees.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of [regulate] the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. The purpose of this regulation is to provide notices, instructions, and reports for the protection of workers who may be exposed to radiation in their employment.

Section 1. Applicability. The requirements of this regulation apply to all persons working in an environment in which radioactive materials or radiation-producing machines are received, owned, [used,] possessed, [or] transferred, or used. This regulation establishes requirements for notices, instructions, and reports by licensees and registrants to individuals engaged in work under a license or registration and provides for options available to such individuals in connection with the provisions of the Act and regulations, orders, licenses and registration issued thereunder regarding radiological working conditions.

Section 2. Posting of Notices to Workers. (1) Each licensee or registrant shall post current copies of the following documents:
(a) The requirements of this regulation and 902 KAR 100:020, relating to standards for protection against radiation;
(b) The license, certificate of registration, conditions or documents incorporated into the license by reference and amendments thereto;
(c) The operating procedures applicable to work under the license or registration; and
(d) Any notice of violation involving radiological working conditions, proposed imposition of civil penalty, or order issued pursuant to these regulations, and any response from the licensee or registrant.

(2) If posting of a document specified in subsection (1)(a), (b), or (c) of this section is not practicable, the licensee or registrant may post a notice which describes the document and states where it may be examined.

(3) Cabinet form KR-441 "Notice to Employees" shall be posted by each licensee or registrant wherever individuals work in or frequent any portion of a restricted area.

(4) Documents, notices or forms posted pursuant to this section shall appear in a sufficient number of places to permit individuals engaged in work under the license or registration to observe them on the way to or from any particular work location to which the document applies, shall be conspicuous, and shall be replaced if defaced or altered.

(5) Cabinet documents posted pursuant to subsection (1)(d) of this section shall be posted within two (2) working days after receipt of the documents from the cabinet; the licensee's or registrant's response, if any, shall be posted within two (2) working days after dispatch from the licensee or registrant. Such documents shall remain posted for a minimum of five (5) working days or until action correcting the violation has been completed, whichever is later.

Section 3. Instructions to Workers. All individuals working in or frequenting any portion of a restricted area shall:

(1) Be kept informed of the storage, transfer, or use of sources [radioactive materials or] of radiation in such portions of the restricted area;

(2) Shall be instructed in the health protection problems associated with exposure to [such] radioactive material or radiation, in precautions or procedures to minimize exposure, and in the purposes and functions of protective devices employed;

(3) Shall be instructed in, and instructed to observe, to the extent within the worker's control, the applicable provisions of cabinet regulations and licenses for the protection of personnel from exposures to radiation or radioactive material occurring in such areas;

(4) Shall be instructed of their responsibility to report promptly to the licensee or registrant any condition which may lead to or cause a violation of cabinet regulations and licenses or unnecessary exposure to radiation or radioactive material;

(5) Shall be instructed in the appropriate response to warnings made in the event of any unusual occurrence or malfunction that may involve exposure to radiation or radioactive material; [and]

(6) Shall be advised as to the radiation exposure reports which workers may request pursuant to Section 4 of this regulation; and [.]

(7) The extent of these instructions shall be commensurate with potential radiological health protection problems in the restricted area.

Section 4. Notifications and Reports to Individuals. (1) Radiation exposure data for an individual and the results of any measurements, analyses, and calculations of radioactive material deposited or retained in the body of an individual shall be reported to the individual as specified in this section. The information reported shall include data and results obtained pursuant to cabinet regulations, orders, or license conditions, as shown in records maintained by the licensee or registrant pursuant to cabinet regulations. Each notification and report shall:

(a) Be in writing;

(b) Include appropriate identifying data such as the name of the licensee or registrant and the name of the individual;

(c) The individual's exposure information; and

(d) Contain the following statement: "This report is furnished to you under the provisions of the Kentucky Cabinet for Human Resources' radiation regulations. You should preserve this report for further reference."

(2) At the request of any worker, each licensee or registrant shall advise such worker annually of the worker's exposure to radiation or radioactive material as shown in records maintained by the licensee or registrant pursuant to these regulations.

(3) At the request of a worker formerly engaged in work controlled by the licensee or the registrant, each licensee or registrant shall furnish to the worker a report of the worker's exposure to radiation or radioactive material. Such report shall be furnished within thirty (30) days from the time request is made, or within thirty (30) days after the exposure of the individual has been determined by the licensee or registrant, whichever is later; shall cover, within the period of time specified in the request, each calendar quarter in which the worker's activities involved exposure to radiation from radioactive materials licensed by, or radiation machines registered with the cabinet; and shall include the dates and locations of work under the license or registration in which the worker participated during this period.

(4) When a licensee or registrant is required to report to the cabinet any exposure of an individual to radiation or radioactive material, the licensee or the registrant shall also provide the individual a report on the [his] exposure data included therein. Such reports shall be transmitted at a time not later than the transmittal to the cabinet.

(5) At the request of a worker who is terminating employment in a given calendar quarter with the licensee or registrant in work involving radiation dose, or of a worker who, while employed by another person, is terminating assignment to work involving radiation dose in the licensee's or registrant's facility in that calendar quarter, each licensee or registrant shall provide to each such worker, or to the worker's designee, at termination, a written report regarding the radiation dose received by that worker from operations of the licensee or registrant during that specifically identified calendar quarter or fraction thereof, or provide a written estimate of that dose if the finally determined personnel monitoring results are not available at that time. Estimated doses shall be clearly indicated as such.

Section 5. Presence of Representatives of Licensees or Registrants and Workers During Inspection. (1) Each licensee or registrant shall afford to the cabinet at all reasonable times opportunity to inspect materials, machines, activities, facilities, premises, and records pursuant to these regulations.

(2) During an inspection, cabinet inspectors may consult privately with workers as specified

in Section 6 of this regulation. The licensee or registrant may accompany cabinet inspectors during other phases of an inspection.

(3) If, at the time of inspection, an individual has been authorized by the workers to represent them during cabinet inspections, the licensee or registrant shall notify the inspectors of such authorization and shall give the workers' representative an opportunity to accompany the inspectors during the inspection of physical working conditions.

(4) Each workers' representative shall be routinely engaged in work under control of the licensee or registrant and shall have received instructions as specified in Section 3 of this regulation.

(5) Different representatives of licensees or registrants and workers may accompany the inspectors during different phases of an inspection if there is no resulting interference with the conduct of an inspection. However, only one (1) workers' representative at a time may accompany the inspectors.

(6) With the approval of the licensee or registrant and the workers' representative an individual who is not routinely engaged in work under control of the licensee or registrant, for example, a consultant to the licensee or registrant or to the workers' representative, shall be afforded the opportunity to accompany cabinet inspectors during the inspection of physical working conditions.

(7) Notwithstanding the other provisions of this section, cabinet inspectors are authorized to refuse to permit accompaniment by any individual who deliberately interferes with a fair and orderly inspection. With regard to any area containing proprietary information, the workers' representative for that area shall be an individual previously authorized by the licensee or registrant to enter that area.

Section 6. Consultation with Workers During Inspection. (1) Cabinet inspectors may consult privately with workers concerning matters of occupational radiation protection and other matters related to applicable provisions of cabinet regulations and licenses to the extent the inspectors deem necessary for the conduct of an effective and thorough inspection.

(2) During the course of an inspection any worker may bring privately to the attention of the inspectors, either orally or in writing, any past or present condition which he has reason to believe may have contributed to or caused any violation of the Act, these regulations, or license condition, or any unnecessary exposure of an individual to radiation from licensed radioactive material or a registered radiation machine under the licensee's or registrant's control. Any such notice in writing shall comply with the requirements of Section 7(1) of this regulation.

(3) The provisions of subsection (2) of this section shall not be interpreted as authorization to disregard instructions pursuant to Section 3 of this regulation.

Section 7. Requests by Workers for Inspections. (1) Any worker or representative of workers who believes that a violation of the Act, these regulations or license conditions exists or has occurred in work under a license or registration with regard to radiological working conditions in which the worker is engaged, may request an inspection by giving notice of the alleged violation to the Cabinet for Human Resources, Radiation Control [Branch, 275 East Main Street, Frankfort, Kentucky 40621]. Any such notice shall be in writing, shall set forth the specific grounds for the notice, and shall be signed by the worker or representative of the workers. A copy shall be provided to the licensee or registrant by the cabinet [for Human Resources, Radiation Control Branch, 275 East Main, Frankfort, Kentucky 40621,] no later than at the time of inspection except that, upon the request of the worker giving such notice, his name and the name of individuals referred to therein shall not appear in such copy or on any record published, released, or made available by the cabinet, except for good cause shown.

(2) If, upon receipt of such notice, the Manager, Radiation Control [Branch], determines that the complaint meets the requirements set forth in subsection (1) of this section, and that there are reasonable grounds to believe that the alleged violation exists or has occurred, he shall cause an inspection to be made as soon as practicable, to determine if such alleged violation exists or has occurred. Inspections pursuant to this section need not be limited to matters referred to in the complaint.

(3) No licensee or registrant or contractor or subcontractor of a licensee or registrant shall discharge or in any manner discriminate against any worker because such worker has filed any complaint or instituted or caused to be instituted any proceeding under these regulations or has testified or is about to testify in any such proceeding or because of the exercise by such worker on behalf of himself or others of any option afforded by this regulation.

Section 8. Inspections Not Warranted; Informal Review. (1) If the [Kentucky] Cabinet for Human Resources, Radiation Control [Branch] determines, with respect to a complaint under Section 7 of this regulation, that an inspection is not warranted because there are no reasonable grounds to believe that a violation exists or has occurred, the cabinet [for Human Resources, Radiation Control Branch] shall notify the complainant in writing of such determination. The complainant may obtain review of such determination by submitting a written statement of position with the Commissioner, Department for Health Services, of the cabinet, who will provide the licensee or registrant with a copy of such statement by certified mail, excluding, at the request of the complainant, the name of the complainant. The licensee or registrant may submit an opposing written statement of position with the commissioner, who will provide the complainant with a copy of such statement by certified mail. Upon the request of the complainant, the commissioner may hold an informal hearing in which the complainant and the licensee or registrant may orally present their views. An informal hearing may also be held at the request of the licensee or registrant, but disclosure of the identity of the complainant will be made only following receipt of written authorization from the complainant. After considering all written or oral views presented, the commissioner shall affirm, modify, or reverse the determination of [the] Radiation Control [Branch], and furnish the complainant and the licensee or registrant a

written notification of the [his] decision and the reason therefor.

(2) If [the] Radiation Control [Branch] determines that an inspection is not warranted because the requirements of Section 7(1) of this regulation have not been met, the manager of the branch shall notify the complainant in writing of such determination. Such determination shall be without prejudice to the filing of a new complaint meeting the requirements of Section 7(1) of this regulation.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary

APPROVED BY AGENCY: November 1, 1985

FILED WITH LRC: November 12, 1985 at 9 a.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager

(1) Type and number of entities affected:

(a) Direct and indirect costs or savings to those affected:

1. First year: N/A

2. Continuing costs or savings: N/A

3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A

(b) Reporting and paperwork requirements: None required.

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: N/A

2. Continuing costs or savings: N/A

3. Additional factors increasing or decreasing costs: N/A

(b) Reporting and paperwork requirements: None required.

(3) Assessment of anticipated effect on state and local revenues: None

(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.

(a) Necessity of proposed regulation if in conflict: N/A

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A

(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

## CABINET FOR HUMAN RESOURCES
## Department for Employment Services
## Division of Unemployment Insurance
## (Proposed Amendment)

**903 KAR 5:260. Unemployment insurance procedures.**

RELATES TO: KRS 341.005 through 341.990

PURSUANT TO: KRS 13A.100, 194.050(1), 341.115

NECESSITY AND FUNCTION: Title III of the Social Security Act authorizes the states to implement an unemployment insurance program. The Cabinet for Human Resources is authorized by KRS 194.050 to adopt such rules and regulations as are necessary to implement programs mandated by federal law or to qualify for receipt of federal funds and as are necessary to cooperate with federal agencies for the proper administration of the cabinet and its programs. The function of this regulation is to implement the procedures required to administer the unemployment insurance program in accordance with applicable state and federal laws and regulations.

Section 1. In order to facilitate the administration of the unemployment insurance program as authorized by Title III of the Social Security Act and KRS Chapter 341, the following operating manuals are adopted by reference:

(1) Unemployment Insurance Local Office Manual as issued February 1984 and last revised October 22, 1985 [July 12, 1985]. This manual includes procedures: for requiring proper identification of persons filing claims for benefits; for taking and processing initial, additional, reactivated and continued claims for benefits; for assigning claimants to the appropriate group for the eligibility review program; for conducting benefit rights interviews; for processing payorder cards for payment; for correcting and changing benefit data; for registering claimants for work; for conducting the eligibility review program; for stopping and releasing payment of benefits; for entering claim history and benefit payment information into the data base; for taking and processing interstate claims, combined wage claims, claims by former federal employees and ex-service-members, and claims for extended benefits and federal supplemental compensation benefits; for conducting investigations and issuing determinations regarding a claimant's separation, ability to work, availability for work, active search for work, benefit entitlement, and deductions from benefits; for processing employers' protests to claims; for taking requests for reconsideration of monetary eligibility; for establishing benefit overpayments and initiating recovery or recoupment by processing partial payment agreements or issuing liens; for initiating action on lost or returned checks; for detecting and initiating recovery of fraudulent overpayments; for filing appeals to eligibility determinations; for reporting workload time spent; for compiling claims and nonmonetary determination statistics; and for ranking of local offices based on performance criteria.

(2) Unemployment Insurance Benefit Branch Procedures Manual issued May, 1982 and last revised October 15, 1985 [December 12, 1984]. This manual includes procedures for administering the payment of unemployment insurance benefits; for maintaining accounts for

all benefit income and expenditures; for detecting, establishing and initiating recovery of benefit overpayments; for assigning benefit charges to employer accounts; for conducting a quality review of nonmonetary determinations affecting the payment of benefits; for processing unemployment claims for former federal employees, ex-service-members, combined wage claimants, interstate claims, claims for Disaster Unemployment Assistance, claims under the Trade Readjustment Act and claims under the Work Incentive Program; for reconsidering monetary rate determinations; for processing payment for lost or returned benefit checks; and for investigating potential fraud and recommendation of recovery action or criminal prosecution.

(3) Unemployment Insurance Tax Collection and Accounting Branch Manual issued November, 1982 and last revised August 1, 1985 [January 15, 1985]. This manual includes procedures: for setting up, transferring and cancelling employer contribution and reimbursement accounts; for collecting quarterly taxes from contributory employers and for billing reimbursing employers for benefits paid; for auditing quarterly wage and tax reports by making adjustments, assessing additional payment and penalties and crediting tax overpayments; for maintaining records of employer accounts and tax payments; for adjusting wages if required when a reconsideration of monetary benefit eligibility is filed; and for collecting delinquent taxes by filing tax liens, recommending suits and temporary restraining orders, garnishing wages, filing claims in bankruptcy or against monies due to delinquent employers from state agencies.

(4) Unemployment Insurance Administrative Support Branch Manual issued December, 1983 and last revised November 9, 1984. This manual includes procedures: for maintaining files of benefit claims, employer records, appeals, and unemployment insurance commission orders; for maintaining mail security operations for all checks received by the division; for gathering statistics and conducting statistical studies; for verifying workload items for the budget process; for publishing statistical reports for the division and for general publication; for maintaining and distributing federal and state-released procedures; for maintaining all procedures manuals; for conducting the unemployment insurance quality appraisal; for training division personnel; for retaining and disposing of records; for providing data processing liaison services; for preparing state and federal budgets; for operating the Cost Model Management System; for maintaining the Cost Information System; for controlling forms control; and for monitoring purchases, expenditures and repairs.

(5) Unemployment Insurance Field Audit Manual issued February 1984 and last revised January 11, 1985. This manual includes procedures for handling matters which cannot be handled directly or expediently by the central office tax branch, such as procedures: for locating employers; for conducting investigations of employers, and their payrolls and employment records; for determining an employer's status under the law; for assessing contributions and collecting delinquent contributions; for serving legal papers; for conducting property investigations; for auditing employer records; and for furnishing technical assistance to employers.

(6) Unemployment Insurance Director's Office Manual issued November 18, 1983, and last revised December 12, 1984. This manual includes procedures for operating the Fraud Investigations and Internal Security Unit such as procedures for: administering the unit; detecting fraud; prosecuting fraud cases; closing out fraud cases; preventing fraud; maintaining internal security; and conducting other investigations.

(7) Kentucky Unemployment Insurance Commission Administrative Branch Manual issued September 1, 1985. This manual includes procedures for the daily operations of the branch. Such procedures include staff duties and responsibilities, the review of cases, the conduct of hearings, the preparation of decisions and the proper handling of records and reports.

Section 2. All documents incorporated by reference herein are on file for public inspection in the Office of the Commissioner for Employment Services, 275 East Main Street, Frankfort, Kentucky 40621 and in local unemployment insurance offices located throughout the state.

Section 3. Summary of Amendment. Unemployment Insurance Local Office Manual. (1) Chapter 2000, Initial Claims, strike entire chapter and substitute in lieu thereof new chapter dated 8-30-85, which revises the chapter's format to the standardized Department for Employment Services Manual format. [Chapter 6000, Claims Investigation, strike pages 92 and 93 dated 10-17-84, and pages 94-95 dated 12-7-84, and substitute in lieu thereof pages 92-95 dated 7-12-85, which revise procedures regarding partial payment agreements.]

(2) Chapter 3000, Continued Claims, strike page (3110-3140) - (3140-3150) dated 6-13-85, and substitute in lieu thereof page (3110-3140) - (3140-3150) dated 8-1-85, which deletes the acceptance of a claimant's registration with a private employment agency as constituting as sufficient work search. Strike page (3025-3040) - (3040-3045) dated 6-13-85, and substitute in lieu thereof page (3025-3040) - (3040-3045) dated 8-30-85, which revises the procedures for completing forms and which excludes from in-person reporting those claimants who are in approved training [entire chapter and substitute in lieu thereof new chapter dated 6-13-85, which adds Section 3025, Excess Earnings, and which revises the chapter's format to the standardized Department for Employment Services manual format].

(3) Chapter 4000, Video Operations, strike contents page dated 6-5-85, and substitute in lieu thereof contents page dated 10-18-85. Strike page (4060-4090) - (4090-4100) dated 3-1-85, and substitute in lieu thereof page (4060-4090) - (4090-4100) dated 10-18-85, which identifies program 4T. Strike pages (4120-4120) through (4215-4215) dated 3-1-85, and substitute in lieu thereof pages (4120-4120) through (4115-4115) dated 10-18-85 which describe program 4B and which provide instructions for accessing program 42 [Chapter 2000, Initial Claims, strike pages 7 and 8 dated 10-2-84, and substitute in lieu thereof pages 7 and 8 dated 6-5-85, which incorporates the use of a new computer program into the initial claims filing process].

(4) Chapter 6000, Claims Investigation, strike entire chapter and insert in lieu thereof new chapter dated 9-16-85, which describes the proper usage of various forms and which revises the chapter's format to the standarized Department of Employment Services Manual format. Strike page (6090-6090) - (6090-6092) dated 9-16-85, and substitute in lieu thereof page (6090-6090) - (6090-6092) dated 10-22-85, which describes the proper form to use under certain circumstances. Strike page (6097-6097(3)) - (6097-6100) dated 9-16-85, and insert in lieu thereof page (6097-6097(3)) - (6097-6100) dated 10-22-85, which describes the proper form to use under certain circumstances. [Chapter 4000, Video Operations, strike contents pages dated 3-1-85, and substitute in lieu thereof contents page dated 6-5-85. Strike pages (4150-4155) and pages (4200-4205) dated 3-1-85, and substitute in lieu thereof pages (4150-4155) - (4160) and (4200-4205) dated 6-5-85, which identifies computer program 4T-MOD applicant.]

(5) Chapter 7000, Fraud, strike entire chapter and insert in lieu thereof new chapter dated 10-18-85, which revises the chapter's format to the standardized Department for Employment Services Manual format.

Section 4. Summary of Amendment, Unemployment Insurance Benefit Branch Manual. (1) Chapter 1000, Introduction, add new chapter dated 10-15-85, which revises the chapter's format to the standardized Department for Employment Services Manual format.

(2) Chapter 2000, State and Federal Claims Section, add new chapter dated 10-15-85, which revises the chapter's format to the standardized Department for Employment Services Manual format.

(3) Chapter 3000, Interstate Section, add new chapter dated 10-15-85, which revises the chapter's format to the standardized Department for Employment Services Manual format.

(4) Chapter 5000, the Federal Payment Section, add new chapter dated 10-15-85, which revises the chapter's format to the standardized Department for Employment Services Manual format.

Section 5. Summary of Amendment. Tax Collections and Accounting Branch Manual. Chapter 300, Accounting and Delinquency Section, strike page 2 of Section 391 dated 7-29-83, and substitute in lieu thereof page 2 dated 8-1-85, which revises the procedure for completing forms. Strike page 6 of Section 314.1 dated 7-29-83, and substitute in lieu thereof page 6 dated 8-1-85, which revises the procedure for completing forms. Strike page 9 of Section 314.5 dated 7-29-83, and substitute in lieu thereof page 9 dated 8-1-85, which provides that the section supervisor will verify the amount of interest earned on daily deposits and will transfer such earnings to the trust fund.

JAMES P. DANIELS, Commissioner
E. AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 6, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985, of their desire to appear and testify at the hearing: Hughes Walker, General Counsel, Office of General Counsel, Cabinet for Human Resources, 275 East Main Street, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: James P. Daniels
(1) Type and number of entities affected: Unemployment insurance benefit claimants: thousands per year.
(a) Direct and indirect costs or savings to those affected: None
1. First year: None
2. Continuing costs or savings: None
3. Additional factors increasing or decreasing costs (note any effects upon competition): None
(b) Reporting and paperwork requirements: None
(2) Effects on the promulgating administrative body: None
(a) Direct and indirect costs or savings: None
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements: None
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: N/A
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments: This amendment merely incorporates operational procedures by reference as required by KRS Chapter 13A.

Tiering:
Was tiering applied? No. (1) Procedure already in effect; (2) All claimants treated equally under the law.

**CABINET FOR HUMAN RESOURCES**
**Department for Social Insurance**
**Division of Management and Development**
**(Proposed Amendment)**

**904 KAR 1:009. Physicians' services.**

RELATES TO: KRS 205.520
PURSUANT TO: KRS 194.050
NECESSITY AND FUNCTION: The Cabinet for Human Resources has responsibility to administer the program of Medical Assistance in accordance with Title XIX of the Social Security Act. KRS 205.520 empowers the cabinet, by regulation, to comply with any requirement that may be imposed or opportunity presented by federal law for the provision of medical assistance to Kentucky's indigent citizenry. This regulation sets forth the provisions relating to physicians' services for which payment shall be made by the Medical Assistance Program in behalf of both the categorically needy and the medically needy.

Section 1. Physicians' Services. Covered services shall include those furnished by physicians through direct physician-patient

contact in the office, the patient's home, a hospital, a skilled nursing or intermediate care facility or elsewhere. For purposes of the Medical Assistance Program, oral surgeons shall be treated in the same manner as physicians with regard to coverage for services within their scope of licensed practice, and the term "physician" shall be construed to include oral surgeons unless the context in which it is used is to the contrary.

Section 2. Limitations. (1) Coverage for initial and extensive visits shall be limited to one (1) visit per patient per physician per calendar year.

(2) Payment for outpatient psychiatric services rendered by other than board-eligible and board-certified psychiatrists shall be limited to four (4) such services per patient per physician per twelve (12) month period.

(3) A patient placed in "lock-in" status due to over-utilization is to receive services only from his/her lock-in provider except in the case of emergency or referral.

(4) Coverage for laboratory procedures performed in the physician's office shall be limited to those procedures listed on the agency's physician laboratory benefit schedule. Physician laboratory procedures are limited to those specified as payable, except that the professional component of laboratory procedures performed by board certified pathologists in a hospital setting or an outpatient surgical clinic are covered so long as the physician has an agreement with the hospital or outpatient surgical clinic for the provision of laboratory procedures.

(5) The cost of preparations used in injections shall not be considered a covered benefit.

(6) Telephone contacts with patients shall not be considered a covered benefit.

JACK F. WADDELL, Commissioner
E. AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 4, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985, of their desire to appear and testify at the hearing: Hughes Walker, General Counsel, Office of General Counsel, Cabinet for Human Resources, 275 East Main Street, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Roy Butler
(1) Type and number of entities affected: All oral surgeons (approximately 106) participating in the Medical Assistance Program.
(a) Direct and indirect costs or savings to those affected: None
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements: None
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: None
2. Continuing costs or savings: None
3. Additional factors increasing or decreasing costs: None
(b) Reporting and paperwork requirements: None
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: N/A
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments: Assumes that if additional services are performed by oral surgeons, such services will be performed in their offices, thus reducing the use of hospital inpatient and outpatient facilities for dental services with a resultant cost offset.

Tiering:
Was tiering applied? No. No applicable for Medicaid regulations.

## CABINET FOR HUMAN RESOURCES
### Department for Social Insurance
### Division of Management and Development
### (Proposed Amendment)

**904 KAR 1:020. Payment for drugs.**

RELATES TO: KRS 205.550, 205.560
PURSUANT TO: KRS 194.050
NECESSITY AND FUNCTION: The Department for Human Resources has responsibility to administer a program of Medical Assistance under Title XIX of the Social Security Act. KRS 205.550 and 205.560 require that the secretary prescribe the methods for determining costs for vendor payments for medical services. This regulation sets forth the method for determining amounts payable by the department for drugs.

Section 1. Maximum Allowable Cost Reimbursement Limits. (1) Reimbursement to pharmacists participating in the Medical Assistance Program for those drugs contained on the Kentucky Medical Assistance Program Outpatient Drug List and provided to eligible recipients is limited to the lowest of:
(a) The maximum allowable cost (MAC) of the drug, if any, plus a dispensing fee; or
(b) The estimated acquisition cost (EAC) of the drug plus a dispensing fee; or
(c) The provider's usual and customary charge to the public for a like product and service.
(2) Reimbursement to skilled nursing and intermediate care facilities for drugs provided to eligible recipients is allowable in accordance with the following:
(a) The Kentucky Medical Assistance Program Outpatient Drug List (with additions and deletions thereto) shall be provided by the program to each participating facility, and for the drugs contained therein, the limits specified in subsection (1) of this section are applicable;
(b) For drugs not on the drug list, the

maximum reimbursement shall be the same as set forth in subsection (1)(a) through (c) of this section. EAC's shall be determined in the same manner as for drugs included on the Outpatient Drug List [lower of: for any drugs with a MAC set by the federal government, the MAC cost; and for all other drugs the published price of the drug as shown in the latest issue of the Drug Topics Red Book, including supplements, or the price shown in the appropriate Prescription Pricing Guide, depending on which is the latest available, plus a dispensing fee; or the provider's usual and customary charge to the public for a like product and service]. SNF/ICF facilities shall not impose an additional charge on medicaid eligible recipients for drugs because of the limitations set forth in Section 1(2) of this regulation;

(c) A packaging cost allowance of not more than six (6) cents per dose may be added to the drug cost (if not already included) for unit dose packaged drugs. The packaging cost (up to six (6) cents, plus the drug cost is added to the dispensing fee to determine the total reimbursement amount for a unit dose packaged prescription;

(d) There shall be no more than two (2) dispensing fees allowed per drug within a thirty (30) day period, except for Schedules II, III, and IV controlled substances and for non-solid dosage forms, including topical medication preparations, for which no more than four (4) dispensing fees per drug will be paid within a thirty (30) day period. Though dispensing fees are limited, this shall not be construed as placing a limit on the quantity of reimbursable drugs for which the program will pay for any patient, since the reasonable cost of the drug (as defined herein) is reimbursable as a covered service in whatever quantity is considered medically necessary for the patient. Non-solid dosage forms include all covered drug items other than oral tablets or capsule forms. Drug items or other related supplies purchased for routine use and which may be purchased without a prescription, including food supplements, are not reimbursable in SNFs or ICFs under the drug program, though the cost of such drug, supply item or food supplement, is an allowable cost for the facility with the cost computed in accordance with the state regulation covering medicaid reimbursement for the facility;

(e) Whenever possible, unused drugs paid for by the department shall be returned to the pharmacy with the credit for the cost of the drug and the unit dose packaging cost (if applicable) accruing to the department as an offset against allowable ancillary cost; and

(f) Interim payments made to participating facilities for allowable drug costs shall be settled at actual allowable costs computed in accordance with the upper limits shown herein at the end of the facilities' fiscal year.

(3) Reimbursement to hospitals for drugs provided to eligible recipients is on the basis of reasonable cost pursuant to 904 KAR 1:013.

Section 2. Physician Maximum Allowable Cost (MAC) Override. The MAC price limitation in Section 1 of this regulation shall not apply in any case where a physician certifies in his own handwriting that in his medical judgment, a specific covered brand is medically necessary for a particular patient. In such instances, reimbursement shall be based on the lower of the EAC plus a professional dispensing fee or the provider's usual and customary charge to the public for the drug.

Section 3. Dispensing Fees. Effective July 1, 1984, the dispensing fee shall be no more than three (3) dollars and twenty-five (25) cents per prescription for drugs reimbursed through the outpatient drug program, as shown in Section 1(1) of this regulation, where the covered drugs are limited to those contained on the Kentucky Medical Assistance Program Outpatient Drug List. The allowable dispensing fee shall be no more than three (3) dollars and twenty-five (25) cents (except for the additional amount for unit dose packaging as shown in Section 1(2)(c) of this regulation) for drugs reimbursed as part of the covered services of skilled nursing and intermediate care facilities, as shown in Section 1(2) of this regulation.

Section 4. Reimbursement to Dispensing Physicians. Participating dispensing physicians who practice in counties where no pharmacies are located are reimbursed for the cost of the drug only, with the cost computed as the maximum allowable cost or estimated acquisition cost as shown in Section 1(1) of this regulation, or the physician's usual and customary charge to the general public for the drug if less.

Section 5. Implementation. The provisions of this regulation as amended shall be effective with regard to services provided on or after October 1, 1985.

E. AUSTIN, JR., Secretary
JACK F. WADDELL, Commissioner
APPROVED BY AGENCY: October 8, 1985
FILED WITH LRC: November 4, 1985 at 10 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985, of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Roy Butler
(1) Type and number of entities affected: All participating skilled nursing and intermediate care facilities.
(a) Direct and indirect costs or savings to those affected: None
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements: None
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: $260,000 (savings)*
2. Continuing costs or savings: $260,000 (savings)
3. Additional factors increasing or decreasing costs: None
(b) Reporting and paperwork requirements: None
(3) Assessment of anticipated effect on state

and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: N/A
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments: *Assumes an average reduction of 3.334% in estimated acquisition cost with drug ingredient costs of $7.8 million per year.

Tiering:
Was tiering applied? No. Not applicable for Medicaid regulations.

**CABINET FOR HUMAN RESOURCES**
**Department for Social Insurance**
**Division of Management and Development**
**(Proposed Amendment)**

**904 KAR 1:026. Dental services.**

RELATES TO: KRS 205.520
PURSUANT TO: KRS 194.050
NECESSITY AND FUNCTION: The Cabinet for Human Resources has responsibility to administer the program of Medical Assistance in accordance with Title XIX of the Social Security Act. KRS 205.520 empowers the cabinet, by regulation, to comply with any requirement that may be imposed or opportunity presented by federal law for the provision of medical assistance to Kentucky's indigent citizenry. This regulation sets forth the provisions relating to dental services for which payment shall be made by the Medical Assistance Program in behalf of both the categorically needy and the medically needy.

Section 1. Out-of-Hospital Services. Payment for services is limited to those procedures listed in the cabinet's Dental Benefit Schedule which are included in the following categories:
(1) Diagnostic;
(2) Preventive;
(3) Oral surgery;
(4) Endodontics;
(5) Orthodontics;
(6) Prosthetics;
(7) Operative;
(8) Crown; and
(9) Other services.

Section 2. Limitations for Those Under Age Twenty-one (21). The following limitations shall be applicable with regard to services provided to eligible recipients of medical assistance who are under age twenty-one (21):
(1) Dental prophylaxis, to include application of stannous fluoride, is limited to one (1) treatment per year.
(2) Bitewing x-rays are limited to four (4) x-rays per patient per year per dentist.
(3) Full mouth radiograph is limited to one (1) per patient per every two (2) years per dentist.
(4) The following orthodontic procedures are limited per twelve (12) month period to any combination totaling two (2) per patient: fixed space maintainer, band type; removable space maintainer, acrylic; removable appliance for tooth guidance; and fixed or cemented appliance for tooth guidance.
(5) The following prosthetic procedures are limited as specified for the individual procedure:
(a) Transitional appliance, includes one (1) tooth on appliance, upper appliance, is limited to one (1) per twelve (12) month period, per patient;
(b) Transitional appliance, includes one (1) tooth on appliance, lower appliance, is limited to one (1) per twelve (12) month period, per patient;
(c) Repair of fracture of transitional appliance and space maintainer is limited to three (3) per twelve (12) month period, per patient;
(d) Repair of fracture and replacement of one (1) broken tooth on a transitional appliance and space maintainer is limited to three (3) per twelve (12) month period, per patient;
(e) Repairing broken complete denture with no teeth damaged is limited to three (3) per twelve (12) month period, per patient; and
(f) Repairing broken complete denture and replacing one (1) broken tooth is limited to three (3) per twelve (12) month period, per patient.
(g) Relining upper denture (flask cured only) is limited to one (1) per twelve (12) month period per patient.
(h) Relining lower denture (flask cured only) is limited to one (1) twelve (12) month period per patient.

Section 3. Inpatient Hospital Services. (1) Payment shall be made for all hospital inpatient services rendered by oral surgeons <u>subject to the general physician limitations shown in 904 KAR 1:009, Physicians' services</u>.
(2) Payment <u>shall be provided</u> for services rendered by general dentists for hospital inpatient care for patients termed to be "medically a high risk," defined as:
(a) Heart disease;
(b) Respiratory disease;
(c) Chronic bleeder;
(d) Uncontrollable patient, i.e., retardate, emotionally disturbed;
(e) Other, e.g., car accident, high temperature, massive infection.

Section 4. Coverage of Dental Benefits for Adults. The following named dental benefits only shall be covered for adults (eligible individuals aged twenty-one (21) or over), effective January 1, 1982.
(1) Oral surgery, as follows:
(a) Extraction, uncomplicated, single tooth, with local anesthetic and including routine post-operative care; and
(b) Extraction, uncomplicated, each additional tooth, with local anesthetic and including routine post-operative care.
(2) Operative, as follows:
(a) Amalgam filling for one (1) surface cavity;
(b) Amalgam filling for two (2) surface cavity;
(c) Amalgam filling for cavity involving three (3) or more surfaces;
(d) Silicate cement filling;
(e) Acrylic, plastic, or composite filling; and
(f) Buildup to repair a fractured incisal or anterior tooth.
(3) Diagnostic services, as follows:

(a) Bitewing x-rays, limited to four (4) x-rays per patient per year per dentist;
(b) Intraoral periapical radiograph, single view; and
(c) Full mouth radiograph, single panaramic film limited to one (1) per patient per every two (2) years per dentist.
(4) Other services, as follows: emergency treatment for pain, infection and hemorrhage.

Section 5. Other Provisions, Limitations and Clarifications. (1) Intraoral periapical radiograph, single view, is limited to fourteen (14) per patient, per year, per dentist.
(2) The procedure code for stainless steel crown will also include polycarbonate (acrylic) and full composite crown for anterior teeth. However, should a provider choose to provide crowns for anterior teeth, the usual and customary charge for a stainless steel crown must be billed.
(3) Bonded veneers are not covered as a separate entity, nor should they be provided and billed under any existing procedure code.
(4) The Sargenti method of root canal treatment is not covered under the present root canal procedure codes.
(5) The Medical Assistance Program recognizes five (5) surfaces of a tooth (buccal or labial, mesial, distal, lingual, occlusal or incisal). Only one (1) filling may be billed per surface with a maximum of five (5) per tooth.
(6) Nitrous oxide is not covered under the procedure for general anesthesia or any other procedure.

[Section 6. The provisions of this regulation, as provided for in Sections 1 through 5, shall be effective April 1, 1983.]

JACK F. WADDELL, Commissioner
E. AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 4, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985, of their desire to appear and testify at the hearing: Hughes Walker, General Counsel, Office of General Counsel, Cabinet for Human Resources, 275 East Main Street, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Roy Butler
(1) Type and number of entities affected: All oral surgeons participating in the Medical Assistance Program.
(a) Direct and indirect costs or savings to those affected: None
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements: None
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings: None
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements: None
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: N/A
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments: The cost impact is shown in the regulatory impact analysis for 904 KAR 1:009, Physicians' services.

Tiering:
Was tiering applied? No. Not applicable for Medicaid regulations.

**CABINET FOR HUMAN RESOURCES**
**Department for Social Insurance**
**Division of Management and Development**
**(Proposed Amendment)**

**904 KAR 1:027. Payments for dental services.**

RELATES TO: KRS 205.520
PURSUANT TO: KRS 194.050
NECESSITY AND FUNCTION: The Cabinet for Human Resources has responsibility to administer the program of Medical Assistance in accordance with Title XIX of the Social Security Act. KRS 205.520 empowers the cabinet, by regulation, to comply with any requirement that may be imposed, or opportunity presented, by federal law for the provision of medical assistance to Kentucky's indigent citizenry. This regulation sets forth the method for determining amounts payable by the cabinet for dental services.

Section 1. Out-of-Hospital Care. (1) The cabinet shall reimburse participating dentists for covered services rendered to eligible medical assistance recipients at rates based on the dentist's usual customary, reasonable, and prevailing charges.
(2) Definitions. For purpose of determination of payment:
(a) "Usual and customary charge" refers to the uniform amount which the individual dentist charges in the majority of cases for a specific dental procedure or service.
(b) "Prevailing charge" refers to those charges which fall within the range of charges as computed by the use of a pre-determined and established statistical percentile. Prevailing charges for each dental procedure are derived from the overall pattern existing within the state.
(3) Method and source of information on charges:
(a) Effective with fee revisions December 1, 1974 and after, individual fee profiles for participating dentists will be generated from historical data accumulated from charges submitted and processed by the Medical Assistance Program during all of the calendar year preceding the start of the fiscal year in which the determination is made.

(b) Effective with revisions December 1, 1974 and after, Title XIX prevailing fee maximums will be generated from the same historical data as referenced in paragraph (a) of this subsection.

(c) Effective with revisions December 1, 1974 and after, when applicable, Title XVIII, Part B current aggregate prevailing charge data will be utilized by the Medical Assistance Program.

(d) Percentile. The Title XIX prevailing charges were established by utilizing the statistical computation of the 50th and 75th percentile.

(4) Maximum reimbursement for covered procedures. Reimbursement for covered procedures shall be limited to the lowest of the following:

(a) The actual charge for services rendered as submitted on the billing statement.

(b) The dentist's median charge for a given service derived from claims processed during all of the calendar year preceding the start of the fiscal year in which the determination is made.

(c) The Title XIX prevailing fee maximum for a given service, derived from claims processed as described in paragraph (b) of this subsection.

Section 2. Hospital Inpatient Care. (1) Hospitalized inpatient care refers to those services provided inpatients. It does not include dental services provided in the outpatient, extended care or home health units of hospitals. Any dentist [or oral surgeon] submitting a claim for either of the two (2) hospital inpatient care benefits - attendance or consultation - must agree to accept payment in full for services rendered that patient during that admission.

[(2) An oral surgeon may additionally provide those services included under the in-hospital surgery section of the dental benefit schedule and be reimbursed on a per-procedure basis. Reimbursement for these services shall be at a rate of 100 percent of the first twenty (20) dollars of the allowable charges plus thirty-five (35) percent of the amount of allowable charges over twenty (20) dollars. Maximum allowable charges will initially be the same as physician maximums, with the maximums being based on dentists' charges after sufficient data for the establishing of allowable charge maximums has been collected by the cabinet. Services not included under in-hospital surgery and performed by an oral surgeon on an inpatient basis should be billed as attendance or consultation as applicable. The "attendance fee" shall be fifty (50) dollars and the "consultation fee" shall be twenty-five (25) dollars.]

(2) [(3)] A general dentist may submit a claim for hospital inpatient services for the patient termed "medically a high risk." Medically high risk is defined as a patient in one (1) of the following classifications:

(a) Heart disease;

(b) Respiratory disease;

(c) Chronic bleeder;

(d) Uncontrollable patient (retardate, emotionally disturbed); or

(e) Other (car accident, high temperature, massive infection, etc.).

(3) [(4)] A general dentist shall receive "attendance fee" or "consultation fee" for the hospital inpatient service in the amount of forty (40) dollars as "attendance fee" and twenty (20) dollars as "consultation fee."

(4) [(5)] "Attendance fee" is considered to be full payment for daily attendance of a hospital inpatient, per admission, regardless of length of stay, diagnosis, or type of professional service rendered. This fee is to be requested by the attending dentist [or oral surgeon] for any given admission. The attendance fee is not applicable to services included under in-hospital surgery.

(5) [(6)] "Consultation fee" is considered to be in full payment of consultation provided on behalf of a hospital inpatient or at the request of the consulting [oral surgeon/]dentist. This fee may be paid to more than one (1) [oral surgeon/]dentist per admission. The fee is thus considered full payment for all consultation provided by a given [oral surgeon/]dentist (other than the attending [oral surgeon/]dentist) during a given admission. [For purpose of payment in this program the administration of anesthesia by an oral surgeon will be considered consultation.]

Section 3. Oral surgeons shall be treated in the same manner as physicians for reimbursement purposes, and shall be subject to the terms and conditions of payment shown in 904 KAR 1:010, Payments for physicians' services.

JACK F. WADDELL, Commissioner
E. AUSTIN, JR., Secretary

APPROVED BY AGENCY: November 4, 1985

FILED WITH LRC: November 12, 1985 at 9 a.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985, of their desire to appear and testify at the hearing: Hughes Walker, General Counsel, Office of General Counsel, Cabinet for Human Resources, 275 East Main Street, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Roy Butler

(1) Type and number of entities affected: All oral surgeons participating in the Medical Assistance Program.

(a) Direct and indirect costs or savings to those affected: None

1. First year:

2. Continuing costs or savings:

3. Additional factors increasing or decreasing costs (note any effects upon competition):

(b) Reporting and paperwork requirements: None

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings: None

1. First year:

2. Continuing costs or savings:

3. Additional factors increasing or decreasing costs:

(b) Reporting and paperwork requirements: None

(3) Assessment of anticipated effect on state and local revenues: None

(4) Assessment of alternative methods; reasons why alternatives were rejected: N/A

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None

(a) Necessity of proposed regulation if in

conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments: The cost impact is shown in the regulatory impact analysis for 904 KAR 1:009, Physicians' services.

Tiering:
Was tiering applied? No. Not applicable for Medicaid regulations.

CABINET FOR HUMAN RESOURCES
Department for Social Insurance
Division of Management and Development
(Proposed Amendment)

**904 KAR 1:250. Incorporation by reference of materials relating to the Medical Assistance Program.**

RELATES TO: KRS 194.030(6), 205.520
PURSUANT TO: KRS 194.050
NECESSITY AND FUNCTION: The Cabinet for Human Resources has responsibility to administer the program of Medical Assistance in accordance with Title XIX of the Social Security Act. KRS 205.520 empowers the cabinet, by regulation, to comply with any requirement that may be imposed, or opportunity presented, by federal law for the provision of medical assistance to Kentucky's indigent citizenry. This regulation incorporates into regulatory form, by reference, materials used by the cabinet in the implementation of the Medical Assistance Program and is applicable for both the categorically and medically needy.

Section 1. Incorporation by Reference. The cabinet shall incorporate by reference materials used in the implementation of the Medical Assistance Program, subject to the provisions contained in 904 KAR 2:140, Section 1, Supplementary policies for programs administered by the Department for Social Insurance.

Section 2. Listing of Incorporated Material. The following listed materials are hereby incorporated by reference, effective on the date shown:
(1) Federal Medicaid regulations at 42 CFR Parts 430-456, and interim final regulations at 42 CFR Parts 430-456, effective November [July] 1, 1985. The regulations contain federal supplementary policies, interpretations and implementing instructions for the Medical Assistance Program as authorized by Title XIX of the Social Security Act.
(2) Federal "State Medicaid Manual," effective November [July] 1, 1985. The "State Medicaid Manual" contains federal interpretations and clarifications of policy relating to implementation of the Medical Assistance Program.
(3) Federal action transmittals and program memoranda issued by the Health Care Financing Administration as follows: HCFA-AT-79-63, 79-72, 79-98, 80-9, 80-59, 81-23, 81-33, 81-35, 82-1, 82-2, 82-20, 83-1, 83-4, 83-7, 83-8, 83-11, 84-1, 84-2, 84-4, 84-5, 84-10, 84-16, 85-1, and HCFA PM-85-4, 85-10, and 85-13, effective October [July] 1, 1985. Action transmittals and program memoranda contain federal instructions relating to implementation of the Medical Assistance Program.
(4) Federal transmittal notices issued by the Health Care Financing Administration as follows: DQC-1-82, 10-82; DPO-76-81, 77-81, 78-81; MCD-46-81, 48-81, 55-81, 61-81, 62-81, 64-81, 67-81, 82-81, 86-81, 87-81, 89-81, 92-81, 1-82, 2-82, 6-82, 7-82, 10-82, 14-82, 16-82, 17-82, 18-82, 19-82, 25-82, 26-82, 28-82, 30-82, 33-82, 34-82, 35-82, 38-82, 41-82, 42-82, 50-82, 52-82, 2-83, 5-83, 9-83, 11-83, 12-83, 13-83, 14-83, 15-83, 19-83, 20-83, 26-83, 28-83, 29-83, 30-83, 35-83, 39-83, 40-83, 42-83, 1-84, 6-84, 7-84, 8-84, 9-84, 11-84, 13-84, 14-84, 15-84, 16-84, 18-84, 20-84, 23-84, 24-84, 25-84, 26-84, 27-84, 29-84, 34-84, 35-84, 36-84, 39-84, 48-84, 50-84, 51-84, 55-84, 2-85, 4-85, 5-85, 6-85, 8-85, 10-85, 11-85, 14-85, 18-85, 19-85, 21-85, 22-85, 23-85, 24-85, [and] 25-85, 27-85, 28-85, 29-85, 30-85, 31-85, 32-85, 33-85, 34-85, 36-85, 37-85, 38-85, 39-85, 41-85, 42-85, 43-85, 44-85, 46-85, and 47-85 effective November [July] 1, 1985. Transmittal notices contain federal clarifications of policy relating to implementation of the Medical Assistance Program.
(5) Medicare and Medicaid Guide, Volumes I, II, III, and IV, as published by the Commerce Clearing House, Inc., with the following related new developments transfer binders: 1981-1, 1981-2, 1982, 1983-1, 1983-2, and 1984-1, effective November [July] 1, 1985. The Medicare and Medicaid Guide contains reprints of federal laws and regulations relating to the Medicare and Medicaid programs; reprints of Medicare/Medicaid related court decisions; Medicare principles of reimbursement; summaries of state plan characteristics; and other items of general information relating to the Medicare and Medicaid programs. Although the cabinet is bound by federal Medicaid law and regulations in the implementation of the Medical Assistance Program, the Guide is used principally as supplementary material for reimbursement issues in situations where the cabinet's vendor reimbursement system uses the Medicare cost principles in unaddressed areas.
(6) State Medicaid Program policies and procedures manuals and letters issued by the cabinet, and which contain benefit descriptions and operating instructions used by agency staff and participating vendors in the provision of, and billing for, Medical Assistance benefits provided eligible program recipients, as follows:
(a) Home and Community Based Services Waiver Project Adult Day Health Care Services, effective October [July] 1, 1985;
(b) Alternative Intermediate Services/Mental Retardation Project, effective October [July] 1, 1985;
(c) Birthing Center Services, effective October [January] 1, 1985;
(d) Community Mental Health Benefits, effective July 1, 1985;
(e) Dental Benefits, effective October [July] 1, 1985;
(f) Early and Periodic Screening, Diagnosis and Treatment Benefits, effective July 1, 1985;
(g) Family Planning Benefits, effective October [July] 1, 1985;
(h) Hearing Services Benefits, effective October [July] 1, 1985;
(i) Home and Community Based Services Waiver Project, effective October [July] 1, 1985;
(j) Home Health Benefits, effective October [July] 1, 1985;
(k) Hospital Services Benefits, effective October [July] 1, 1985;

(l) Independent Laboratory Services Benefits, effective October [July] 1, 1985;
(m) Intermediate Care Facility Benefits, effective October [January] 1, 1985;
(n) Mental Hospital Services Benefits, effective October [July] 1, 1985;
(o) Nurse Anesthetist Services, effective July 1, 1985;
(p) Nurse Midwife, effective October [July] 1, 1985;
(q) Pharmacy Services, effective November [July] 1, 1985;
(r) Physician Services Benefits, effective October [July] 1, 1985;
(s) Primary Care Benefits, effective October [July] 1, 1985;
(t) Rural Health Clinic Benefits, effective October [July] 1, 1985;
(u) Skilled Nursing Facility Benefits, effective October [January] 1, 1985;
(v) Ambulance Transportation Benefits, effective May 16, 1984, as revised;
(w) Vision Services Benefits, effective November [July] 1, 1985;
(x) Podiatry Services, effective October [July] 1, 1985;
(y) Ambulatory Surgical Center Benefits, effective July 1, 1985;
(z) Renal Dialysis Center Benefits, effective October [July] 1, 1985;
(aa) General Provider Letter A-8, effective July 1, 1985;
(bb) Medical Director's Letter dated April 26, 1985, effective July 1, 1985; and
(cc) EDS Federal Hospital Letter (as fiscal agent for the Medicaid Program) dated April 1, 1985, effective July 1, 1985.

Section 3. All documents included by reference herein may be reviewed during regular working hours in the Division of Management and Development, Department for Social Insurance, 275 East Main Street, Frankfort, Kentucky. Copies may be obtained from that office upon payment of an appropriate fee which will not exceed approximate cost.

JACK F. WADDELL, Commissioner
E. AUSTIN, JR., Secretary
APPROVED BY AGENCY: November 4, 1985
FILED WITH LRC: November 12, 1985 at 3 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Roy Butler
(1) Type and number of entities affected: Various Medicaid providers and recipients including providers who dispense drugs and recipients who use anti-rheumatic or maintenance drugs.
(a) Direct and indirect costs or savings to those affected: None
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements: None
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: $2,450,000 (Savings)*
2. Continuing costs or savings: $2,450,000 (Savings)
3. Additional factors increasing or decreasing costs: None
(b) Reporting and paperwork requirements: None
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: N/A
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments: *Assumes $1,800,000 in savings from deleting single source anti-rheumatic drugs from the Outpatient Drug List, and $650,000 in savings from requiring that those drugs on the drug list classed as maintenance drugs be dispensed in quantities sufficient for at least thirty (30) days' use.

Tiering:
Was tiering applied? No. Not applicable for Medicaid regulations.

**CABINET FOR HUMAN RESOURCES**
**Department for Social Insurance**
**Division of Management and Development**
**(Proposed Amendment)**

**904 KAR 2:022. Kentucky administrative process for child support.**

RELATES TO: KRS 405.400 to 405.530
PURSUANT TO: KRS 405.520
NECESSITY AND FUNCTION: The Cabinet for Human Resources has responsibility for administering the child support program in accordance with Title IV-D of the Social Security Act, Title 45 CFR Sections 301, 302, 303, 304, 305, 306, and 307 and KRS 205.710 to 205.800. In addition, KRS 405.400 to 405.530, the Kentucky Administrative Process [Procedures] for Child Support Act, provides for the establishment and enforcement of child support obligations through administrative process when paternity is not in question. The administrative process supplements existing judicial remedies for non-support. Administrative process can be used to establish and enforce support obligations for children receiving Aid to Families with Dependent Children benefits, hereinafter referred to as AFDC, as well as for non-AFDC children. This regulation sets forth the procedures the cabinet will employ in administratively establishing and enforcing child support obligations.

Section 1. Definitions. In addition to the terms defined in KRS 405.420, the following terms shall be defined as set forth below.
(1) "Administrative process" shall mean a method for establishing and enforcing child

support obligations pursuant to KRS 405.400 to 405.530 and the provisions of this regulation.

(2) "Appointment letter" shall mean the cabinet's notification to the parent that the parent's liability for support of the child is being determined. A financial statement for the parent's completion will be included with the appointment letter.

(3) "Default" shall mean the parent's failure to return the financial statement and/or to keep an appointment to determine a support obligation under administrative process.

(4) "Notice of minimum monthly support obligation" shall mean an administrative order issued by the cabinet pursuant to KRS 405.440 notifying the parent of the amount of the child support obligation and of the parent's rights to request a hearing.

(5) "Dispute hearing" shall mean the process whereby the parent's objections to a notice of minimum monthly support obligation are heard by an impartial hearing officer upon a timely request.

(6) [(2)] "Person in possession or control" shall mean the person who has custody of the earnings or property.

(7) [(3)] "Order to withhold" shall mean an administrative order issued by the cabinet to a person in possession or control of the parent's earnings or property to withhold an amount equal to a stated arrearage to satisfy a delinquent child support obligation.

(8) [(4)] "Order to deliver" shall mean an administrative order issued by the cabinet to have earnings or property, belonging to the parent, forwarded by the person in possession or control of the earnings or property to the cabinet to satisfy delinquent child support.

(9) [(5)] "Delinquent support" shall mean past due and unpaid installments on an obligation determined under a court order or a Cabinet for Human Resources administrative order (KRS 405.430) for support of a dependent child, which is owed to or on behalf of the child, or for maintenance to the spouse (or former spouse) with whom the child is living, only if a maintenance obligation has been established with respect to the spouse and the support obligation established with respect to the child is being enforced under the state's IV-D plan.

(10) [(6)] "Order to release withholding" shall mean an order to the person in possession or control of a parent's earnings or property notifying that person that the cabinet is releasing any claim to the designated earnings or property.

Section 2. Administrative Establishment. The cabinet may administratively establish a child support obligation when paternity is not in question, there is no existing order for support of the child and the parent resides or is employed in Kentucky. The cabinet shall send an appointment letter and a financial statement to the parent to assure the parent's right to participate in the establishment of the support obligation. Additionally, the cabinet may administratively establish the debt which accumulated during the first ninety (90) days of AFDC eligibility as an arrearage due the cabinet. Pursuant to KRS 205.792, the ninety (90) days may be extended.

(1) The cabinet shall determine the minimum monthly support obligation in accordance with KRS 405.430. In default cases, the cabinet shall set the obligation at the minimum cost basis on the scale for the number of children in the case.

(a) The following steps shall be used in applying the scale:

1. The gross income, less allowable deductions, of the noncustodial parent shall be added to the gross income, less allowable deductions, of the custodial parent to determine the "Annual Family Gross Income."

2. At the annual family gross income level in the left hand column, the lower of the "income cap" or "cost basis" shall be selected for the number of children in the case.

3. The noncustodial parent's gross income shall be divided by the annual family gross income to obtain the percentage of support to be apportioned to the noncustodial parent.

4. The figure selected in subparagraph 2 of this paragraph shall be multiplied by the percentage from subparagraph 3 of this paragraph to obtain the minimum monthly support obligation.

(b) The scale is set forth below:

(See scale on following pages)

| Annual Family Gross Income | One (1) Child | | Two (2) Children | | Three (3) Children | | Four (4) Children | |
|---|---|---|---|---|---|---|---|---|
| | Cost Basis | (20%) Income Cap | Cost Basis | (25%) Income Cap | Cost Basis | (30%) Income Cap | Cost Basis | (35%) Income Cap |
| $ 0-$ 1,000 | $207 | $ 60 | $325 | $ 60 | $ 436 | $ 60 | $ 542 | $ 60 |
| $ 1,000-$ 1,250 | $207 | $ 60 | $325 | $ 60 | $ 436 | $ 60 | $ 542 | $ 60 |
| $ 1,251-$ 1,500 | $207 | $ 60 | $325 | $ 60 | $ 436 | $ 60 | $ 542 | $ 60 |
| $ 1,501-$ 1,750 | $207 | $ 60 | $325 | $ 60 | $ 436 | $ 60 | $ 542 | $ 60 |
| $ 1,751-$ 2,000 | $207 | $ 60 | $325 | $ 60 | $ 436 | $ 60 | $ 542 | $ 60 |
| $ 2,001-$ 2,250 | $207 | $ 60 | $325 | $ 60 | $ 436 | $ 60 | $ 542 | $ 62 |
| $ 2,251-$ 2,500 | $207 | $ 60 | $325 | $ 60 | $ 436 | $ 60 | $ 542 | $ 69 |
| $ 2,501-$ 2,750 | $207 | $ 60 | $325 | $ 60 | $ 436 | $ 66 | $ 542 | $ 77 |
| $ 2,751-$ 3,000 | $207 | $ 60 | $325 | $ 60 | $ 436 | $ 72 | $ 542 | $ 84 |
| $ 3,001-$ 3,250 | $207 | $ 60 | $325 | $ 65 | $ 436 | $ 78 | $ 542 | $ 91 |
| $ 3,251-$ 3,500 | $207 | $ 60 | $325 | $ 70 | $ 436 | $ 84 | $ 542 | $ 98 |
| $ 3,501-$ 3,750 | $207 | $ 60 | $325 | $ 76 | $ 436 | $ 91 | $ 542 | $ 106 |
| $ 3,751-$ 4,000 | $207 | $ 65 | $325 | $ 81 | $ 436 | $ 97 | $ 542 | $ 113 |
| $ 4,001-$ 4,250 | $207 | $ 69 | $325 | $ 86 | $ 436 | $ 103 | $ 542 | $ 120 |
| $ 4,251-$ 4,500 | $207 | $ 73 | $325 | $ 91 | $ 436 | $ 109 | $ 542 | $ 128 |
| $ 4,501-$ 4,750 | $207 | $ 77 | $325 | $ 96 | $ 436 | $ 116 | $ 542 | $ 135 |
| $ 4,751-$ 5,000 | $207 | $ 81 | $325 | $ 102 | $ 436 | $ 122 | $ 542 | $ 142 |
| $ 5,001-$ 5,250 | $207 | $ 85 | $325 | $ 107 | $ 436 | $ 128 | $ 542 | $ 149 |
| $ 5,251-$ 5,500 | $207 | $ 90 | $325 | $ 112 | $ 436 | $ 134 | $ 542 | $ 157 |
| $ 5,501-$ 5,750 | $209 | $ 94 | $325 | $ 117 | $ 436 | $ 141 | $ 542 | $ 164 |
| $ 5,751-$ 6,000 | $211 | $ 98 | $325 | $ 122 | $ 436 | $ 147 | $ 542 | $ 171 |
| $ 6,001-$ 6,250 | $213 | $102 | $325 | $ 128 | $ 436 | $ 153 | $ 542 | $ 179 |
| $ 6,251-$ 6,500 | $215 | $106 | $325 | $ 133 | $ 436 | $ 159 | $ 542 | $ 186 |
| $ 6,501-$ 6,750 | $217 | $110 | $325 | $ 138 | $ 436 | $ 166 | $ 542 | $ 193 |
| $ 6,751-$ 7,000 | $219 | $115 | $325 | $ 143 | $ 436 | $ 172 | $ 542 | $ 201 |
| $ 7,001-$ 7,250 | $221 | $119 | $325 | $ 148 | $ 436 | $ 178 | $ 542 | $ 208 |
| $ 7,251-$ 7,500 | $223 | $123 | $325 | $ 154 | $ 436 | $ 184 | $ 542 | $ 215 |
| $ 7,501-$ 7,750 | $225 | $127 | $325 | $ 159 | $ 436 | $ 191 | $ 542 | $ 222 |
| $ 7,751-$ 8,000 | $227 | $131 | $325 | $ 164 | $ 436 | $ 197 | $ 542 | $ 230 |
| $ 8,001-$ 8,250 | $229 | $135 | $325 | $ 169 | $ 436 | $ 203 | $ 542 | $ 237 |
| $ 8,251-$ 8,500 | $232 | $140 | $325 | $ 174 | $ 436 | $ 209 | $ 542 | $ 244 |
| $ 8,501-$ 8,750 | $234 | $144 | $325 | $ 180 | $ 436 | $ 216 | $ 542 | $ 252 |
| $ 8,751-$ 9,000 | $236 | $148 | $325 | $ 185 | $ 436 | $ 222 | $ 542 | $ 259 |
| $ 9,001-$ 9,250 | $238 | $152 | $325 | $ 190 | $ 436 | $ 228 | $ 542 | $ 266 |
| $ 9,251-$ 9,500 | $240 | $156 | $325 | $ 195 | $ 436 | $ 234 | $ 542 | $ 273 |
| $ 9,501-$ 9,750 | $242 | $160 | $325 | $ 201 | $ 436 | $ 241 | $ 542 | $ 281 |
| $ 9,751-$10,000 | $244 | $165 | $325 | $ 206 | $ 436 | $ 247 | $ 542 | $ 288 |
| $10,001-$10,250 | $246 | $169 | $325 | $ 211 | $ 436 | $ 253 | $ 542 | $ 295 |
| $10,251-$10,500 | $248 | $173 | $325 | $ 216 | $ 436 | $ 259 | $ 542 | $ 303 |
| $10,501-$10,750 | $250 | $177 | $325 | $ 221 | $ 436 | $ 266 | $ 542 | $ 310 |
| $10,751-$11,000 | $252 | $181 | $325 | $ 227 | $ 436 | $ 272 | $ 542 | $ 317 |
| $11,001-$11,500 | $258 | $188 | $342 | $ 234 | $ 448 | $ 281 | $ 542 | $ 328 |
| $11,501-$12,000 | $263 | $196 | $360 | $ 245 | $ 459 | $ 294 | $ 542 | $ 343 |
| $12,001-$12,500 | $269 | $204 | $377 | $ 255 | $ 471 | $ 306 | $ 542 | $ 357 |
| $12,501-$13,000 | $274 | $213 | $395 | $ 266 | $ 483 | $ 319 | $ 542 | $ 372 |
| $13,001-$13,500 | $280 | $221 | $412 | $ 276 | $ 495 | $ 331 | $ 542 | $ 386 |
| $13,501-$14,000 | $286 | $229 | $430 | $ 287 | $ 506 | $ 344 | $ 542 | $ 401 |
| $14,001-$14,500 | $291 | $238 | $447 | $ 297 | $ 518 | $ 356 | $ 544 | $ 416 |
| $14,501-$15,000 | $297 | $246 | $465 | $ 307 | $ 530 | $ 369 | $ 556 | $ 430 |
| $15,001-$15,500 | $302 | $254 | $482 | $ 318 | $ 542 | $ 381 | $ 569 | $ 445 |
| $15,501-$16,000 | $308 | $263 | $500 | $ 328 | $ 553 | $ 394 | $ 581 | $ 459 |
| $16,001-$16,500 | $313 | $271 | $517 | $ 339 | $ 565 | $ 406 | $ 593 | $ 474 |
| $16,501-$17,000 | $319 | $279 | $521 | $ 349 | $ 577 | $ 419 | $ 606 | $ 489 |
| $17,001-$17,500 | $325 | $288 | $524 | $ 359 | $ 589 | $ 431 | $ 618 | $ 503 |
| $17,501-$18,000 | $330 | $296 | $528 | $ 370 | $ 600 | $ 444 | $ 630 | $ 518 |
| $18,001-$18,500 | $336 | $304 | $531 | $ 380 | $ 612 | $ 456 | $ 643 | $ 532 |
| $18,501-$19,000 | $341 | $313 | $535 | $ 391 | $ 624 | $ 469 | $ 655 | $ 547 |
| $19,001-$19,500 | $347 | $321 | $538 | $ 401 | $ 636 | $ 481 | $ 668 | $ 561 |
| $19,501-$20,000 | $353 | $329 | $542 | $ 411 | $ 648 | $ 494 | $ 680 | $ 576 |
| $20,001-$20,500 | $358 | $338 | $545 | $ 422 | $ 660 | $ 506 | $ 693 | $ 591 |
| $20,501-$21,000 | $364 | $346 | $549 | $ 432 | $ 671 | $ 519 | $ 705 | $ 605 |
| $21,001-$21,500 | $369 | $354 | $552 | $ 443 | $ 683 | $ 531 | $ 717 | $ 620 |
| $21,501-$22,000 | $375 | $363 | $556 | $ 453 | $ 695 | $ 544 | $ 730 | $ 634 |
| $22,001-$22,500 | $384 | $371 | $559 | $ 464 | $ 702 | $ 556 | $ 737 | $ 649 |
| $22,501-$23,000 | $393 | $379 | $563 | $ 474 | $ 709 | $ 569 | $ 744 | $ 664 |
| $23,001-$23,500 | $402 | $388 | $566 | $ 484 | $ 716 | $ 581 | $ 751 | $ 678 |
| $23,501-$24,000 | $410 | $396 | $570 | $ 495 | $ 722 | $ 594 | $ 759 | $ 693 |
| $24,001-$24,500 | $419 | $404 | $573 | $ 505 | $ 729 | $ 606 | $ 766 | $ 707 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| $24,501-$25,000 | $428 | $413 | $577 | $ 516 | $ 736 | $ 619 | $ 773 | $ 722 |
| $25,001-$25,500 | $437 | $421 | $580 | $ 526 | $ 743 | $ 631 | $ 780 | $ 736 |
| $25,501-$26,000 | $446 | $429 | $584 | $ 536 | $ 750 | $ 644 | $ 787 | $ 751 |
| $26,001-$26,500 | $455 | $438 | $587 | $ 547 | $ 757 | $ 656 | $ 795 | $ 766 |
| $26,501-$27,000 | $464 | $446 | $591 | $ 557 | $ 764 | $ 669 | $ 802 | $ 780 |
| $27,001-$27,500 | $472 | $454 | $594 | $ 568 | $ 771 | $ 681 | $ 809 | $ 795 |
| $27,501-$28,000 | $481 | $463 | $598 | $ 578 | $ 777 | $ 694 | $ 816 | $ 809 |
| $28,001-$28,500 | $490 | $471 | $601 | $ 589 | $ 784 | $ 706 | $ 823 | $ 824 |
| $28,501-$29,000 | $499 | $479 | $605 | $ 599 | $ 791 | $ 719 | $ 831 | $ 839 |
| $29,001-$29,500 | $508 | $488 | $608 | $ 609 | $ 798 | $ 731 | $ 838 | $ 853 |
| $29,501-$30,000 | $517 | $496 | $612 | $ 620 | $ 805 | $ 744 | $ 845 | $ 868 |
| $30,001-$30,500 | $526 | $504 | $615 | $ 630 | $ 812 | $ 756 | $ 852 | $ 882 |
| $30,501-$31,000 | $535 | $513 | $619 | $ 641 | $ 819 | $ 769 | $ 859 | $ 897 |
| $31,001-$31,500 | $543 | $521 | $622 | $ 651 | $ 825 | $ 781 | $ 867 | $ 911 |
| $31,501-$32,000 | $552 | $529 | $626 | $ 661 | $ 832 | $ 794 | $ 874 | $ 926 |
| $32,001-$32,500 | $561 | $538 | $629 | $ 672 | $ 839 | $ 806 | $ 881 | $ 941 |
| $32,501-$33,000 | $570 | $546 | $633 | $ 682 | $ 846 | $ 819 | $ 888 | $ 955 |
| $33,001-$34,000 | $575 | $558 | $647 | $ 698 | $ 860 | $ 838 | $ 903 | $ 977 |
| $34,001-$35,000 | $581 | $575 | $661 | $ 719 | $ 873 | $ 863 | $ 917 | $1,006 |
| $35,001-$36,000 | $586 | $592 | $675 | $ 740 | $ 887 | $ 888 | $ 932 | $1,035 |
| $36,001-$37,000 | $591 | $608 | $690 | $ 760 | $ 901 | $ 913 | $ 946 | $1,065 |
| $37,001-$38,000 | $597 | $625 | $704 | $ 781 | $ 915 | $ 938 | $ 960 | $1,094 |
| $38,001-$39,000 | $602 | $642 | $718 | $ 802 | $ 928 | $ 963 | $ 975 | $1,123 |
| $39,001-$40,000 | $607 | $658 | $732 | $ 823 | $ 942 | $ 988 | $ 989 | $1,152 |
| $40,001-$41,000 | $613 | $675 | $746 | $ 844 | $ 956 | $1,013 | $1,004 | $1,181 |
| $41,001-$42,000 | $618 | $692 | $760 | $ 865 | $ 970 | $1,038 | $1,018 | $1,210 |
| $42,001-$43,000 | $623 | $708 | $774 | $ 885 | $ 983 | $1,063 | $1,032 | $1,240 |
| $43,001-$44,000 | $629 | $725 | $788 | $ 906 | $ 997 | $1,088 | $1,047 | $1,269 |
| $44,001-$45,000 | $634 | $742 | $803 | $ 927 | $1,020 | $1,113 | $1,071 | $1,298 |
| $45,001-$46,000 | $639 | $758 | $817 | $ 948 | $1,044 | $1,138 | $1,096 | $1,327 |
| $46,001-$47,000 | $644 | $775 | $831 | $ 969 | $1,067 | $1,163 | $1,121 | $1,356 |
| $47,001-$48,000 | $650 | $792 | $845 | $ 990 | $1,091 | $1,188 | $1,145 | $1,385 |
| $48,001-$49,000 | $655 | $808 | $859 | $1,010 | $1,114 | $1,213 | $1,170 | $1,415 |
| $49,001-$50,000 | $660 | $825 | $873 | $1,031 | $1,138 | $1,238 | $1,196 | $1,444 |
| $50,001-$51,000 | $666 | $842 | $987 | $1,052 | $1,161 | $1,263 | $1,219 | $1,473 |
| $51,001-$52,000 | $671 | $858 | $902 | $1,073 | $1,185 | $1,288 | $1,244 | $1,502 |
| $52,001-$53,000 | $676 | $875 | $916 | $1,094 | $1,208 | $1,313 | $1,268 | $1,531 |
| $53,001-$54,000 | $682 | $892 | $930 | $1,115 | $1,232 | $1,338 | $1,293 | $1,560 |
| $54,001-$55,000 | $687 | $908 | $944 | $1,135 | $1,255 | $1,363 | $1,318 | $1,590 |
| $55,001 Plus | $676 | | $944 | | $1,255 | | $1,318 | |

(2) After the minimum monthly support obligation and arrearage due the cabinet have been determined, the cabinet shall serve the notice of minimum monthly support obligation upon the parent either in person or by certified mail, return receipt requested, in accordance with KRS 405.440.

(a) The effective date of the obligation is the first day of the month following the month the parent receives the notice of minimum monthly support obligation.

(b) In accordance with KRS 405.430(2), the cabinet may modify the minimum monthly support obligation as established by the cabinet. However, the cabinet shall not modify any obligation which was established by a court of competent jurisdiction.

Section 3. Appeal Procedures. The parent may request a dispute hearing in accordance with KRS 405.440. An impartial hearing officer shall conduct the dispute hearing in the county of the child's or parent's residence. The hearing shall be scheduled within sixty (60) days of the parent's request. The parent may request a hearing pursuant to the instructions in the notice of minimum monthly support obligation.

(1) The request for a dispute hearing will be considered timely if:

(a) Made within twenty (20) days of receipt of a notice of minimum monthly support obligation;

(b) Made within twenty (20) days after the parent is notified that a request for modification of the obligation will not be honored; or

(c) Made after thirty (30) days but before fifty (50) days have passed since the parent requested a modification of the obligation, but the cabinet has not acted upon the request.

(2) If the request is not made within the time period specified in subsection (1) of this section, the parent must show good cause for the late request. Good cause reasons may include, but are not limited to:

(a) The parent's being away from home during the entire filing period;

(b) The parent's inability to read the notice of minimum monthly support obligation; or

(c) The parent's incapacity due to a serious illness during the entire filing period.

(3) The parent or his/her authorized representative may review case material pertinent to the reason for the dispute and may present witnesses at the hearing.

(4) If the objection is being filed on an original notice of minimum monthly support obligations, the obligation shall be stayed pursuant to KRS 405.450(2).

(5) If the objection is being filed on a request for modification of obligation, the amount on the prior notice is enforceable and that amount must be paid while the hearing is pending.

(a) If the parent prevails, the cabinet shall promptly return to the parent any overpayments made since the hearing was requested.

(b) If the cabinet prevails, the obligation will be retroactive to the effective date on the

notice of minimum monthly support obligation.

(6) The parent may withdraw the hearing request by writing to the local IV-D office or the Hearing Branch in the Department for Social Insurance's Division of Administrative Review.

(7) The parent or the cabinet may file an appeal to the circuit court within twenty (20) days after receipt of the hearing officer's decision pursuant to KRS 405.450.

Section 4. [2.] Administrative Enforcement. Whenever the cabinet determines that the parent owes delinquent support, the cabinet may implement administrative enforcement remedies to collect the delinquent support amounts. Personal property shall be exempted from attachment as specified in KRS Chapter 427.

(1) Order to withhold. When a delinquency equal to the amount of support payable for one (1) month [of thirty-two (32) days or more] is identified, the cabinet shall determine the total amount of support owed. The cabinet shall serve an order to withhold to the person(s) in possession or control of the parent's earnings or property. A copy of the order to withhold shall be provided to the parent. The order shall state the basis for and the amount of the delinquent support and shall state that the parent may offer a bond satisfactory to the cabinet to avoid losing possession of the property.

(a) When one (1) or more person(s) in possession or control of the parent's earnings or property is identified, the cabinet may issue and serve an order to withhold for each person in possession or control. When more than one (1) person in possession or control answers the order to withhold and the combined assets exceed the amount of the delinquent support, the cabinet shall:

1. Decide which person in possession or control to serve with an order to deliver. The cabinet may take into consideration the parent's request as to which source to withhold.

2. Send an order to release withholding to any person in possession or control not being served with an order to deliver.

3. Request only a portion of an asset to satisfy the delinquent support when the total asset exceeds the amount of delinquent support.

(b) The parent may contact the cabinet for an explanation of administrative enforcement. The cabinet may accept partial payment sufficient to release the order to withhold when deemed appropriate by the secretary.

(2) Order to deliver. When the employer or the person in possession or control of the earnings or property responds to the order to withhold, the cabinet may complete and serve on the person in possession or control an order to deliver the earnings and/or property to the cabinet. Earnings or property delivered to the cabinet in accordance with an order to deliver shall be applied to the amount of delinquent support pursuant to federal law.

(3) Order to release withholding. The cabinet shall issue and serve an order to release withholding on its claim on the parent's earnings or property when the stated delinquent support is satisfied.

JACK F. WADDELL, Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: October 15, 1985
FILED WITH LRC: November 12, 1985 at 9 a.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Roy Butler
(1) Type and number of entities affected: 7,000 children needing obligation established.
(a) Direct and indirect costs or savings to those affected: Negligible
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements: None
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: $1.5 million (state share) collections; State Share $793,000 costs of opening 6 offices (salaries for 105 employees included) ($700,000 state share)
2. Continuing costs or savings: Costs - $769,120 ongoing costs for 6 offices, state share (salaries included; Savings - $663,192 state share ongoing collections annually after first year.
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements:
(3) Assessment of anticipated effect on state and local revenues:
(4) Assessment of alternative methods; reasons why alternatives were rejected:
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication:
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments:

Tiering:
Was tiering applied? No. Not applicable.

**CABINET FOR HUMAN RESOURCES**
**Department for Social Services**
**Division of Program Management**
**(Proposed Amendment)**

**905 KAR 6:020. State plan for CSBG Program.**

RELATES TO: KRS 273.410 to 273.453
PURSUANT TO: KRS 194.050, 273.448
NECESSITY AND FUNCTION: P.L. 97-35, Subtitle B - "Community Services Block Grant Program," enacted August 13, 1981, authorizes grants to states to ameliorate the causes of poverty in communities within the state. KRS 194.050 authorizes the Cabinet for Human Resources to adopt such rules and regulations as are necessary to implement programs mandated by federal law, or to qualify for receipt of

federal funds and as are necessary to cooperate with federal agencies for the proper administration of the cabinet and its programs. The function of this regulation is to implement the Kentucky Community Services Block Grant Program in accordance with applicable state and federal laws and regulations.

Section 1. State Plan for Community Services Block Grant Programs. The Cabinet for Human Resources hereby adopts by reference the "Community Services Block Grant Program Plan for the Commonwealth of Kentucky" for the fiscal and program year ending September 30, 1986 [1984], as the plan for utilization of CSBG funds. The plan includes assurances as required by federal law and regulations; provisions for use of funds by community action agencies; programmatic considerations such as geographic areas to be served, client eligibility, and complaint procedures; and fiscal considerations such as administration, required match, and allocation formula. The "Community Services Block Grant Program Plan" may be reviewed during regular working hours at the Office of the Commissioner, Department for Social Services, 275 East Main Street, Frankfort, Kentucky.

Section 2. Summary of Amendments. Strike the Community Services Block Grant Program Plan for Fiscal Year 1984-1985 and substitute in lieu thereof Community Services Block Grant Program Plan for Fiscal Year 1985-86. This plan sets forth the services that will be provided with the federal funds available.

E. AUSTIN, Jr., Secretary
ANNA GRACE DAY, Commissioner
APPROVED BY AGENCY: November 7, 1985
FILED WITH LRC: November 14, 1985 at 1 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 23, 1985, at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. Those interested in attending this hearing shall notify in writing the following office by December 18, 1985: R. Hughes Walker, Office of General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Margaret Hockensmith
(1) Type and number of entities affected: 15 area development districts.
(a) Direct and indirect costs or savings to those affected: None - continuation of funding.
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements:
(2) Effects on the promulgating administrative body: None - continuation of funding.
(a) Direct and indirect costs or savings:
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements:
(3) Assessment of anticipated effect on state and local revenues: Federal funds for services.
(4) Assessment of alternative methods; reasons why alternatives were rejected: Must conform to federal requirements.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None.
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments:

Tiering:
Was tiering applied? No. The plan is a compilation of all area plans which are prepared by a standardized format.

## CABINET FOR HUMAN RESOURCES
## Department for Social Services
## Children's Residential Services
## (Proposed Amendment)

**905 KAR 7:110. Northern Kentucky Treatment Center policy and procedures manual.**

RELATES TO: KRS Chapters 202A and 208
PURSUANT TO: KRS 194.050
NECESSITY AND FUNCTION: P.L. 97-35, Subpart C, "Social Services Block Grant - Title XX" authorizes grants to states for the provision of social services. KRS 194.050 authorizes the Cabinet for Human Resources to adopt such rules and regulations as are necessary to implement programs mandated by federal law, or to qualify for receipt of federal funds and as are necessary to cooperate with federal agencies for the proper administration of the cabinet and its programs. The function of this regulation is to implement a program for the care and treatment of children who are delinquent, status offenders and mentally ill or emotionally disturbed.

Section 1. Residential Facility Manual. The Cabinet for Human Resources hereby adopts by reference as operating policies and procedures the Northern Kentucky Treatment Center Policies and Procedures Manual as revised through October 15, 1985 [June 21, 1985]. This manual sets forth the policies and procedures for the care and treatment of juveniles residing in the Northern Kentucky Treatment Center. This manual may be reviewed during regular working hours at the Office of the Commissioner, Department for Social Services, 275 East Main Street, Frankfort, Kentucky.

Section 2. Summary of Amendments. In the Treatment Program Section strike Policy TP-5-F, Chemical Treatment; TP-6, Treatment Team Functioning, pages 1 and 2; TP-11, Group Counseling, pages 1 and 2; and TP-13-A and TP-13-A-1 through 5, Daily Routine, dated September 1, 1983, and substitute in lieu thereof TP-5-F, Chemical Treatment; TP-6, Treatment Team Functioning, pages 1 and 2; TP-11, Group Counseling, pages 1 and 2; and TP-13-A and TP-13-A-1 through 5, Daily Routine, dated August 12, 1985 which prohibits the use of chemical restraint, establishes procedures for the multi-disciplinary team approach to treatment and group counseling, and sets forth the daily routine for the residents. Also strike Policy TP-14, Visitation; TP-15, Telephone Contacts; TP-16, Letters and Parcels; and TP-19, Psychiatric/Medical Services dated September 1,

1983 and substitute in lieu thereof policies by the same numbers and titles dated September 26, 1985. These revised policies set forth the requirements for visitation, use of the telephone, incoming and outgoing mail and psychiatric/medical services. [(1) In the Administrative Section strike Policy A-1, Northern Kentucky Treatment Center Philosophy Statement, revised September 1, 1983, and substitute in lieu thereof Policy A-1, Northern Kentucky Treatment Center Philosophy Statement, revised June 21, 1985, which clarifies the program description; insert Policy A-1-A, Mission Statement, dated June 21, 1985, immediately behind Policy A-1. This policy states the purpose of the treatment program at Northern Kentucky Treatment Center.]

[(2) In the Treatment Program Section strike Policy TP-1-A, Residential Orientation to the Program, revised September 1, 1983, Policy TP-2, Transition, revised September 1, 1983, Policy TP-3 including TP-3-A and TP-3-B-1 and 2, Discharge, dated September 1, 1983, and TP-4, Therapeutic Communications with Residents, dated September 1, 1983, and substitute in lieu thereof Policy TP-1-A, TP-2, TP-3 including TP-3-A and TP-3-B-1 and 2, and TP-4 revised June 21, 1985. These revisions update policies relating to admission, transition, discharge, and communication with children at the treatment facility.]

E. AUSTIN, Jr., Secretary
ANNA GRACE DAY, Commissioner
APPROVED BY AGENCY: November 7, 1985
FILED WITH LRC: November 14, 1985 at 1 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 23, 1985, at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. Those interested in attending this hearing shall notify in writing the following office by December 18, 1985: R. Hughes Walker, Office of General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Margaret Hockensmith
(1) Type and number of entities affected: One.
(a) Direct and indirect costs or savings to those affected: None - policy revision.
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements:
(2) Effects on the promulgating administrative body: Clarifies existing policies.
(a) Direct and indirect costs or savings:
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements:
(3) Assessment of anticipated effect on state and local revenues: None.
(4) Assessment of alternative methods; reasons why alternatives were rejected: N/A
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication:
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments:

Tiering:
Was tiering applied? No. Only one facility affected.

## CABINET FOR HUMAN RESOURCES
## Department for Social Services
## Children's Residential Services
## (Proposed Amendment)

**905 KAR 7:210. Central Kentucky Re-Ed Center policy and procedural manual.**

RELATES TO: KRS Chapters 202A and 208
PURSUANT TO: KRS 194.050
NECESSITY AND FUNCTION: P.L. 97-35 , Subpart C, "Social Services Block Grant - Title XX" authorizes grants to states for the provision of social services. KRS 194.050 authorizes the Cabinet for Human Resources to adopt such rules and regulations as are necessary to implement programs mandated by federal law, or to qualify for receipt of federal funds and as are necessary to cooperate with federal agencies for the proper administration of the cabinet and its programs. The function of this regulation is to implement a program for the care and treatment of children who are delinquent, status offenders and mentally ill or emotionally disturbed.

Section 1. Residential Facility Manual. The Cabinet for Human Resources hereby adopts by reference as operating policies and procedures the Central Kentucky Re-Ed Center Policy and Procedural Manual revised through August 15 [May 1], 1985. This manual sets forth the policies and procedures for the care and treatment of children in the Central Kentucky Re-Ed Program. This manual may be reviewed during regular working hours at the Office of the Commissioner, Department for Social Services, 275 East Main Street, Frankfort, Kentucky.

Section 2. (1) In the administrative section of the manual strike Policy A-3, Program Organization, pages A-3.1 through A-3.6, revised 11-11-83 and substitute in lieu thereof Policy A-3, Program Organization, pages A-3.1 through A-3.7, revised July 16, 1985, which describes the organization and functions of the four (4) components of the treatment program at the center.

(2) In the treatment section of the manual strike Policy T-6, Educational Services, page T-6.1, revised 11-11-83 and substitute in lieu thereof Policy T-6, Educational Services, page T-6.1, revised 7-16-85 which sets forth the policy to comply with PL 93-380 as amended.

(3) In the personnel section of the manual strike Policy P-29, Staff Hours, pages P-29 and P-29.1 dated August, 1983, and substitute in lieu thereof Policy P-29, Staff Hours, pages P-29.1 and P-29.2, dated August, 1985, which makes changes in the hours of duty of selected staff.

[Section 2. Summary of Amendments. In the Administrative Section of the manual insert in numerical order Policy A-45, Referral and Admission Activities effective April 26, 1985.

This amendment provides for the systematic collection of data relating to referrals and admissions.]

E. AUSTIN, Jr., Secretary
ANNA GRACE DAY, Commissioner
APPROVED BY AGENCY: November 7, 1985
FILED WITH LRC: November 14, 1985 at 1 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 23, 1985, at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. Those interested in attending this hearing shall notify in writing the following office by December 18, 1985: R. Hughes Walker, Office of General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Margaret Hockensmith
(1) Type and number of entities affected: One.
(a) Direct and indirect costs or savings to those affected: None
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements:
(2) Effects on the promulgating administrative body: Clarifies policies.
(a) Direct and indirect costs or savings:
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements:
(3) Assessment of anticipated effect on state and local revenues:
(4) Assessment of alternative methods; reasons why alternatives were rejected: Already in existence.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments:

Tiering:
Was tiering applied? No. Manual applicable to one facility.

**CABINET FOR HUMAN RESOURCES**
**Department for Social Services**
**Division of Aging Services**
**(Proposed Amendment)**

**905 KAR 8:120. Homecare policy manual for the elderly.**

RELATES TO: 205.455 to 205.465
PURSUANT TO: KRS 194.050
NECESSITY AND FUNCTION: KRS 205.460 directs the Cabinet for Human Resources to provide, within budgetary limitations, in-home services for the aging to include, but not necessarily limited to, homemaker services, chore services, core services, home delivered meal services, and home health aid. The function of this regulation is to establish policies and procedures for carrying out this mandate.

Section 1. The Cabinet for Human Resources hereby adopts, by reference, the "Homecare Policy Manual for the Elderly," completed as of September 1, 1985 [May 11, 1984], as the operating policies and procedures to be followed by contractors participating in the Department for Social Services Homecare Program. This manual includes instructions regarding extraordinary medical expenses, assessments and reassessments, assessment and case management services, units of service, service definitions, reporting and format procedures, and Title III program income and other relevant components of the program. The Homecare Policy manual may be reviewed in the Office of the Commissioner, Department for Social Services, 275 East Main Street, Frankfort, Kentucky, or any of the department's field offices located in each of the 120 counties.

Section 2. Summary of Amendments. Strike HC-83-1 through HC-83-10 and substitute in lieu thereof HC-85-1 through HC-85-10. These policies revise the existing policies related to the operation of the Homecare Program. Strike HC-84-1 through HC-84-3 and substitute in lieu thereof HC-85-11, HC-85-12 and HC-85-13. These policies authorize consideration of extraordinary medical expenses, transmits a form to be used for client assessment, and provides guidelines for transition from one (1) vendor to another. Add HC-85-14 through HC-85-20 which are new policies relating to personnel, quality control and waiting lists. Add HC-86-1 which established Homecare quality assurance procedures.

E. AUSTIN, Jr., Secretary
ANNA GRACE DAY, Commissioner
APPROVED BY AGENCY: November 7, 1985
FILED WITH LRC: November 14, 1985 at 1 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 23, 1985, at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. Those interested in attending this hearing shall notify in writing the following office by December 18, 1985: R. Hughes Walker, Office of General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Margaret Hockensmith
(1) Type and number of entities affected: 15 area development districts.
(a) Direct and indirect costs or savings to those affected: None - revised policies.
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements:
(2) Effects on the promulgating administrative body: None - revised policies.
(a) Direct and indirect costs or savings:
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements:

(3) Assessment of anticipated effect on state and local revenues: None.
(4) Assessment of alternative methods; reasons why alternatives were rejected: N/A
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None.
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments:

Tiering:
Was tiering applied? No. All agencies conform to the same policies.

# PROPOSED REGULATIONS RECEIVED THROUGH NOVEMBER 15

## DEPARTMENT OF AGRICULTURE

**302 KAR 31:010. Hearings upon denial, suspension, modification, or revocation of licenses.**

RELATES TO: KRS Chapter 217B
PURSUANT TO: KRS Chapter 217B, 217B.050
NECESSITY AND FUNCTION: To clarify procedures for the license hearings held pursuant to KRS 217B.103, 217B.540, or 217B.545.

Section 1. Hearings. (1) When conducting license hearings under KRS 217B.103, 217B.540 or 217B.545, the pest control advisory board shall have the authority to:
(a) Administer oaths according to law;
(b) Issue subpoenas authorized by law;
(c) Rule upon offers of proof and receive relevant evidence;
(d) Take or cause depositions to be taken whenever the ends of justice would be service thereby;
(e) Regulate the course of the hearing; and
(f) Make decisions and issue orders.
(2) The department, prior to a license hearing, will prepare a detailed report in the form of an administrative complaint concerning the denial, suspension, modification, or revocation. Copies of the report will be presented to the board prior to the actual hearing. A copy of the report will be sent to the licensee at least fifteen (15) days prior to the actual hearing so that he may be apprised of all the allegations therein. Every party shall have the right to present his case or defense by oral or documentary evidence, and to conduct such cross-examination as may be required for a full and true disclosure of the facts.
(3) The transcript of testimony and exhibits, together with all papers and requests filed in the proceeding, shall constitute the exclusive record for decision. Where the decision rests upon official notice of a material fact not appearing in the evidence in the record, any party shall on timely request be afforded an opportunity to show the contrary.

DAVID E. BOSWELL, Commissioner
APPROVED BY AGENCY: October 25, 1985
FILED WITH LRC: October 29, 1985 at 1 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 27, 1985 at 1 p.m. in Room 713 of the Capital Plaza Tower, Frankfort, Kentucky. Those interested in attending this hearing shall contact in writing: Thomas M. Troth, General Counsel, Kentucky Department of Agriculture, Room 705, Capital Plaza Tower, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Mike Stivers
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected: None
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings: None
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: Department must provide report to licensee and to hearing board.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: Chosen method is most efficient way to run hearings.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? No. Hearing procedures must apply to entire pesticide industry.

## NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
## Department for Environmental Protection
## Division of Waste Management

**401 KAR 30:080. Standards for variances.**

RELATES TO: KRS 224.033, 224.830 through 224.889, 224.994
PURSUANT TO: KRS Chapter 13A, 224.033, 224.081, 224.855
NECESSITY AND FUNCTION: KRS 224.033 and the

waste management provisions of KRS Chapter 224 require the cabinet to adopt rules and regulations for the generation, treatment, storage, recycling and disposal of hazardous wastes and the disposal of solid wastes. This chapter establishes the general administrative procedures which are applicable to 401 KAR Chapters 31 through 49. This regulation sets forth standards and procedures which enable a recycled material to be granted a variance from classification as a waste, and an enclosed-flame device to be classified as a boiler or an industrial furnace.

Section 1. Types of Variances. (1) As referenced in the waste management regulations, a variance is a written waiver from a specific regulatory requirement issued by the cabinet. A variance must be requested in writing and must include all appropriate information required by the cabinet. All variances issued by the cabinet are subject to the conditions specified in the approved variance.

(2) Individual types of variances are specified in this regulation, in Section 2 of 401 KAR 30:020, and in Sections 8 and 9 of 401 KAR 31:010.

Section 2. Variances from Classification as a Waste. In accordance with the standards and criteria in Section 3 of this regulation and the procedures in Section 6 of this regulation and Section 2 of 401 KAR 30:020, the cabinet may determine on a case-by-case basis that the following recycled materials are not wastes:

(1) Materials that are accumulated speculatively without sufficient amounts being recycled (as defined in Section 2(3)(h) of 401 KAR 31:010); or

(2) Materials that are reclaimed and then reused within the original primary production process in which they were generated; or

(3) Materials that have been reclaimed but must be reclaimed further before the materials are completely recovered.

Section 3. Standards and Criteria for Variances from Classification as a Waste. (1) The cabinet may grant requests for a variance from classifying as a waste those materials that are accumulated speculatively without sufficient amounts being recycled if the applicant demonstrates that sufficient amounts of the material will be recycled or transferred for recycling in the following year. If a variance is granted, it is valid only for the following year, but can be renewed on an annual basis by filing a new application. The cabinet's decision will be based on the following standards and criteria:

(a) The manner in which the material is expected to be recycled, when the material is expected to be recycled, and whether this expected disposition is likely to occur (for example, because of past practice, market factors, the nature of the material, or contractual arrangements for recycling);

(b) The reason that the applicant has accumulated the material for one (1) or more years without recycling seventy-five (75) percent of the volume accumulated at the beginning of the year;

(c) The quantity of material already accumulated and the quantity expected to be generated and accumulated before the material is recycled;

(d) The extent to which the material is handled to minimize loss; and

(e) Other relevant factors.

(2) The cabinet may grant requests for a variance from classifying as a waste those materials that are reclaimed and then reused as feedstock within the original primary production process in which the materials were generated if the reclamation operation is an essential part of the production process. This determination will be based on the following criteria:

(a) How economically viable the production process would be if it were to use virgin materials rather than reclaimed materials;

(b) The prevalence of the practice on an industry-wide basis;

(c) The extent to which the material is handled before reclamation to minimize loss;

(d) The time periods between generating the material and its reclamation and between reclamation and return to the original primary production process;

(e) The location of the reclamation operation in relation to the production process;

(f) Whether the reclaimed material is used for the purpose for which it was originally produced when it is returned to the original process and whether it is returned to the process in substantially its original form;

(g) Whether the person who generates the material also reclaims it; and

(h) Other relevant factors.

(3) The cabinet may grant requests for a variance from classifying as a waste those materials that have been reclaimed but must be reclaimed further before recovery is completed if, after initial reclamation, the resulting material is commodity-like (even though it is not yet a commercial product, and has to be reclaimed further). This determination will be based on the following factors.

(a) The degree of processing the material has undergone and the degree of further processing that is required;

(b) The value of the material after is has been reclaimed;

(c) The degree to which the reclaimed material is like an analogous raw material;

(d) The extent to which an end market for the reclaimed material is guaranteed;

(e) The extent to which the reclaimed material is handled to minimize loss; and

(f) Other relevant factors.

Section 4. Variance to be Classified as a Boiler. In accordance with the standards and criteria in Section 1 of 401 KAR 30:010 (definition of "boiler"), and the procedures in Section 6 of this regulation the cabinet may determine on a case-by-case basis that certain enclosed devises using controlled flame combustion are boilers, even though they do not otherwise meet the definition of boiler contained in Section 1 of 401 KAR 30:010 after considering the following criteria:

(1) The extent to which the unit has provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases;

(2) The extent to which the combustion chamber and energy recovery equipment are of integral design;

(3) The efficiency of energy recovery, calculated in terms of the recovered energy

compared with the thermal value of the fuel;
(4) The extent to which exported energy is utilized;
(5) The extent to which the device is in common and customary use as a "boiler" functioning primarily to produce steam, heated fluids, or heated gases; and
(6) Other factors as appropriate.

Section 5. Variance to be Classified as an Industrial Furnace. In accordance with the standards and criteria in Section 1 of 401 KAR 30:010 (definition of "industrial furnace"), and the procedures in Section 6 of this regulation the cabinet may determine on a case-by-case basis that certain enclosed devices using controlled flame combustion are industrial furnaces, even though they do not otherwise meet the definition of industrial furnace contained in Section 1 of 401 KAR 30:010 after considering the following criteria:
(1) The design and use of the device primarily to accomplish recovery of material products;
(2) The use of the device to burn or reduce raw materials to make a material product;
(3) The use of the device to burn or reduce secondary materials as effective substitutes for raw materials, in processes using raw materials as principal feedstocks;
(4) The use of the device to burn or reduce secondary materials as ingredients in an industrial process to make a material product;
(5) The use of the device in common industrial practice to produce a material product; and
(6) Other factors, as appropriate.

Section 6. Procedures for Variances from Classification as a Waste or to be Classified as a Boiler or an Industrial Furnace. The cabinet will use the following procedures in evaluating applications for variances from classification as a waste or applications to classify particular enclosed flame combustion devices as boilers or industrial furnaces:
(1) For recyclers requesting a variance under Section 1 of this regulation from classification as a waste:
(a) The applicant must apply to the cabinet; and
(b) The application must address the relevant criteria contained in Section 3 of this regulation.
(2) For persons requesting a variance for classifying a particular enclosed flame combustion device as a boiler or an industrial furnace:
(a) The applicant must apply to the cabinet; and
(b) The application must address the relevant criteria contained in Section 3 of this regulation.
(3) The cabinet will evaluate the application and issue a draft notice tentatively granting or denying the application. Notification of this tentative decision will be provided by newspaper advertisement and radio broadcast in the locality where the recycler is located. The cabinet will accept comment on the tentative decision for thirty (30) days and may also hold a public hearing upon request or at its discretion. The cabinet will issue a decision after receipt of comments and after the hearing, if any.

CHARLOTTE BALDWIN, Secretary

ADOPTED BY AGENCY: November 12, 1985
FILED WITH LRC: November 13, 1985 at 3 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 30, 1985, at 1 p.m. EST, in the Capital Plaza Tower. Any persons interested in attending this hearing shall submit by December 26, 1985, a written statement of such interest to: J. Alex Barber, Director, Division of Waste Management, 18 Reilly Road, Frankfort, Kentucky 40601. If no statement of interest is received by close of business on December 26, 1985, the hearing on this regulation may be cancelled. Written comments may also be submitted to the address above. Written comments will be accepted until the end of the comment period, which will be close of business on December 30, 1985.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: J. Alex Barber, Director
(1) Type and number of entities affected: This regulation may affect hazardous waste recyclers, eight of which have already contacted the cabinet.
(a) Direct and indirect costs or savings to those affected:
1. First year: This regulation could save facilities the cost of complying with the standards that would have been incurred had the material been regulated as a hazardous waste. However, the overall effect is no new costs or savings because these standards are adopted from already-in-effect federal standards. See note in item (6) Any Additional Information or Comments.
2. Continuing costs or savings: None. See note (1)(a)1.
3. Additional factors increasing or decreasing costs (note any effects upon competition): None. See note (1)(a)1.
(b) Reporting and paperwork requirements: Recyclers are required to apply to the cabinet in order to obtain a variance. However, the overall effect is no new costs or savings because these standards are adopted from already-in-effect federal standards. The application must address the applicable standards contained in this regulation.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: The cabinet will incur the cost of reviewing the applications for variances. These costs will be minimal because the cabinet estimates that there are very few facilities which would be inclined to request a variance.
2. Continuing costs or savings: Minimal. See note in (2)(a)1 above.
3. Additional factors increasing or decreasing costs: None. See note in (2)(a)1 above.
(b) Reporting and paperwork requirements:
(3) Assessment of anticipated effect on state and local revenues: There will be no effect on state or local revenues from promulgation of this regulation.
(4) Assessment of alternative methods; reasons why alternatives were rejected:
(a) This proposed regulation identifies standards and procedures for specific variances.
Alternative:
1. Less stringent: Kentucky could have chosen to be less stringent than the federal regulations and not classify these materials as a hazardous waste without the recyclers requesting a variance. However, if the Kentucky

program is deemed to be less stringent than the federal program, Kentucky could lose authorization to run the RCRA Hazardous Waste program in the state.

2. More stringent: It is unnecessary for Kentucky to be more stringent and not grant variances for these materials because, properly managed in accordance with the applicable standards, these materials will not present a threat to public health or the environment.

3. Present proposal: The present proposal is only a slightly modified version of 40 CFR 260.30-260.33. The modifications will make the variance procedures comply with Kentucky statute. These standards will be adequate to protect Kentucky's public health and the environment.

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None

(a) Necessity of proposed regulation if in conflict: Not applicable.

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: Not applicable.

(6) Any additional information or comments: The impact of this regulation has not been analyzed for those requirements which are equivalent to those found in the corresponding federal regulations, 40 CFR 260.30, 260.31, 260.32 and 260.33. The impact of the federal program was analyzed in 50 FR 614-661, January 4, 1985, and 14216-14219, April 11, 1985. A copy of the January 4, 1985, and April 11, 1985 federal registers have been filed with the regulations compiler of the Legislative Research Commission.

Tiering:
Was tiering applied? Yes. This regulation is tiered to apply to recyclers of hazardous waste and includes the standards which will enable some to obtain variances from specific hazardous waste regulations.

## NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
## Department for Environmental Protection
## Division of Waste Management

### 401 KAR 31:190. Appendix on method of analysis for chlorinated dibenzo-p-dioxins and dibenzofurans.

RELATES TO: KRS 224.830 through 224.877, 224.994

PURSUANT TO: KRS Chapter 13A, 224.033, 224.864(3)

NECESSITY AND FUNCTION: KRS 224.864(3) requires the cabinet to identify the characteristics of and to list hazardous wastes. This chapter identifies and lists hazardous waste. This regulation contains the appendix to this chapter concerning methods of analysis for chlorinated dibenzo-p-dioxins and dibenzofurans.

Section 1. Method 8280. (1) Appendix X of 40 CFR 261 on the method for analysis for chlorinated dibenzo-p-dioxins and dibenzofurans is herein adopted by reference and is included in "The Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." (See Section 3(3) of 401 KAR 30:010.)

(2) The cabinet may consider the July 1985 method "RCRA method 8280 with revisions based on single laboratory testing: method of analysis for chlorinated dibenzo-p-dioxins and dibenzofurans" which is herein adopted by reference as an equivalent test method with approval from the director in accordance with variance procedures in 401 KAR 30:020.

CHARLOTTE E. BALDWIN, Secretary
APPROVED BY AGENCY: November 12, 1985
FILED WITH LRC: November 13, 1985 at 3 p.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 30, 1985, at 1 p.m. EST, in the Capital Plaza Tower. Any persons interested in attending this hearing shall submit by December 26, 1985, a written statement of such interest to: J. Alex Barber, Director, Division of Waste Management, 18 Reilly Road, Frankfort, Kentucky 40601. If no statement of interest is received by close of business on December 26, 1985, the hearing on this regulation may be cancelled. Written comments may also be submitted to the address above. Written comments will be accepted until the end of the comment period, which will be close of business on December 30, 1985.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: J. Alex Barber, Director

(1) Type and number of entities affected:

(a) Direct and indirect costs or savings to those affected: This proposed regulation affects all persons who manage chlorinated dibenzo-p-dioxins and dibenzofurans. The Cabinet has no knowledge of the actual number affected, but estimates that it is small.

1. First year: None. No new impact is anticipated. Testing is already required. This specific test method is no more expensive than other methods already in use.

2. Continuing costs or savings: None.

3. Additional factors increasing or decreasing costs (note any effects upon competition): None.

(b) Reporting and paperwork requirements: Negligible. The only paperwork required would be the recordkeeping associated with the test.

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: None. The review of the test results would only be a small part of procedures already being performed.

2. Continuing costs or savings: None.

3. Additional factors increasing or decreasing costs: None.

(b) Reporting and paperwork requirements:

(3) Assessment of anticipated effect on state and local revenues: There will be no effect on state or local revenues from promulgation of this regulation.

(4) Assessment of alternative methods; reasons why alternatives were rejected:

(a) The Cabinet adopted the procedure for the method of analysis for chlorinated dibenzo-p-dioxins and dibenzofurans from the federal regulations promulgated on January 4, 1985 and the procedure for the revised method from a July, 1985 memorandum from the U.S. Environmental Protection Agency.

Alternative: KRS 224.864(3) requires that the Cabinet's list and criteria for identifying hazardous waste be identical to federal list and criteria; therefore, no alternatives were considered to maintain compliance with Kentucky

statute.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict: Not applicable.
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: Not applicable.
(6) Any additional information or comments: The impact of this regulation has not been analyzed for those requirements which are equivalent to those found in the corresponding federal regulation, 40 CFR Part 261, Appendix X. The impact of the federal program was analyzed in 50 FR 1997-1998, January 14, 1985. A copy of the January 14, 1985 federal register has been filed with the regulations compiler of the Legislative Research Commission.

Tiering:
Was tiering applied? Yes. This regulation applies only to generators and facilities which store, treat, or dispose of chlorinated dibenzo-p-dioxins and dibenzofurans.

**NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET**
**Department for Environmental Protection**
**Division of Waste Management**

**401 KAR 36:030. Recyclable materials used in a manner constituting disposal.**

RELATES TO: KRS 224.033, 224.830 through 224.877, 224.994
PURSUANT TO: KRS Chapter 13A, 224.033, 224.866
NECESSITY AND FUNCTION: KRS 224.866 requires that persons engaging in recycling of hazardous waste obtain a permit. KRS 224.866 requires the cabinet to establish standards for these permits, to require adequate financial responsibility, and to establish minimum standards for closure for all hazardous waste recycling facilities. This chapter establishes minimum standards for hazardous waste recycling facilities. This regulation establishes minimum standards for recyclable materials which are used in a manner constituting disposal.

Section 1. Applicability. (1) This regulation applies to recyclable materials that are applied to or placed on the land:
(a) Without mixing with any other substance(s); or
(b) After mixing with any other substance(s), unless the recyclable material undergoes a chemical reaction so as to become inseparable from the other substance(s) by physical means; or
(c) After combination with any other substance(s) if the resulting combined material is not produced for the general public's use. These materials will be referred to throughout this regulation as "materials used in a manner that constitutes disposal."
(2) Products produced for the general public's use that are used in a manner that constitutes disposal and that contain recyclable materials are not subject to the requirements in this regulation if the recyclable materials have undergone a chemical reaction in the course of producing the product so as to become inseparable by physical means. Commercial fertilizers that are produced for the general public's use that contain recyclable materials are not subject to the requirements in this regulation.

Section 2. Standards Applicable to Generators and Transporters of Materials Used in a Manner that Constitutes Disposal. Generators and transporters of materials that are used in a manner that constitutes disposal are subject to the applicable requirements of 401 KAR Chapters 32 and 33 and the notification requirement under KRS 224.864(3).

Section 3. Standards Applicable to Storers of Materials That Are to be Used in a Manner That Constitutes Disposal Who Are Not the Ultimate Users. Owners or operators of facilities that store recyclable materials that are to be used in a manner that constitutes disposal, but who are not the ultimate users of the materials, are regulated under all applicable provisions of 401 KAR 34:010 through 401 KAR 34.210, 401 KAR 35:010 through 401 KAR 35:210 and 401 KAR Chapter 38 and the notification requirements under 401 KAR 34.020, Section 2 and 401 KAR 35:020, Section 2.

Section 4. Standards Applicable to Users of Materials That Are Used in a Manner That Constitutes Disposal. (1) Owners or operators of facilities that use recyclable materials in a manner that constitutes disposal are regulated under all applicable provisions of 401 KAR 34:010 through 401 KAR 34:230, 401 KAR 35:010 through 401 KAR 35.230 and 401 KAR Chapter 38 and the notification requirements under 401 KAR 34.020, Section 2 and 401 KAR 35:020, Section 2. (These requirements do not apply to products which contain these recyclable materials under the provisions of Section 1(2) of this regulation.)
(2)(a) The use of waste or used oil or other material, which is contaminated with dioxin or any other hazardous waste for dust suppression or road treatment is prohibited.
(b) In accordance with KRS 224.864(2), any person engaged in spreading waste or used oil or other material shall make a determination as to whether such waste is hazardous pursuant to criteria specified in 401 KAR Chapter 31. This determination shall be carried in the vehicle whenever waste or used oil or other material is being applied for dust suppression or road treatment.

CHARLOTTE E. BALDWIN, Secretary
APPROVED BY AGENCY: November 12, 1985
FILED WITH LRC: November 13, 1985 at 3 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 30, 1985, at 1 p.m. EST, in the Capital Plaza Tower. Any persons interested in attending this hearing shall submit by December 26, 1985, a written statement of such interest to: J. Alex Barber, Director, Division of Waste Management, 18 Reilly Road, Frankfort, Kentucky 40601. If no statement of interest is received by close of business on December 26, 1985, the hearing on this regulation may be cancelled. Written comments may also be submitted to the address above. Written comments will be accepted until the end of the comment period, which will be close of business on December 30, 1985.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: J. Alex Barber, Director

(1) Type and number of entities affected: This proposed regulation will affect facilities who recycle hazardous wastes in a manner constituting disposal. The Cabinet estimates that currently there are no companies engaged in this practice.

(a) Direct and indirect costs or savings to those affected:

1. First year: Negligible. See note in item (6) Additional Information and Comments. Persons who spread waste or used oil will be required to carry proof that the material has been tested and shown to be non-hazardous. Since the requirement to test is an existing statutory requirement, the only cost to the oil spreader will be maintain a copy in the vehicle. There will be a savings from the reduced time it will take an oil spreader to prove to an inspector that he is not spreading hazardous waste.

2. Continuing costs or savings: None. See note in (1)(a)1 above.

3. Additional factors increasing or decreasing costs (note any effects upon competition): See note in (1)(a)1 above.

(b) Reporting and paperwork requirements: The only new paperwork requirement will be for oil spreaders to carry a copy of the waste analysis in the truck for compliance verification. There should be only a minimal cost incurred as the result of this requirement.

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: Negligible. The costs for monitoring this type of recycling facility will be minimal. The Cabinet does not anticipate that this type of recycling activity will be used frequently in Kentucky.

2. Continuing costs or savings: None. See note in (2)(a)1

3. Additional factors increasing or decreasing costs: None. See note in (2)(a)1

(b) Reporting and paperwork requirements:

(3) Assessment of anticipated effect on state and local revenues: There will be no effect on state or local revenues from promulgation of this regulation.

(4) Assessment of alternative methods; reasons why alternatives were rejected:

(a) The Cabinet adopted standards for recycling which constitutes disposal which are identical to the federal regulations promulgated on January 4, 1985 and amended on July 15, 1985.

Alternative:

1. Less stringent: The cabinet could have chosen to adopt standards which are less stringent than the federal standards. However, this would have afforded less protection to Kentucky's public health and environment than that afforded by the national program.

2. More stringent: The cabinet could have chosen to adopt more stringent provisions than the federal requirements. However, the standards which have been proposed identical to the federal are sufficient to protect public health and the environment.

3. Present proposal: The present proposal adopts standards for recycling which constitutes disposal which are identical to the federal standards.

(b) The Cabinet chose to adopt requirements for spreaders of waste oil to carry a copy of the waste analysis results proving their waste is non-hazardous and prohibits spreading of oils contaminated with any hazardous waste (including ignitable wastes).

Alternative:

1. Less stringent: The cabinet could have chosen to adopt the federal requirements verbatim. However, this would be inadequate to protect human health and the environment. The spreading of waste oil for dust suppression or road treatment when hazardous only for the characteristic of ignitability is not environmentally acceptable. Volatile ignitable waste oil could pose a fire hazard when spraying. In addition, light weight oils are easily transported in rainfall runoff into creeks resulting in surface water pollution. Since one (1) quart of oil can contaminate up to 2,000,000 gallons of water, and the potential for washing from road surfaces which are designed to promote rainfall runoff is great, the Cabinet chose to prohibit even waste oils which are only ignitable from road oiling or other road treatments.

The Cabinet could also have chosen not to require road oilers to carry copies of the waste analysis. However, waste analysis is required by KRS 224.864 and the requirement to carry a copy of the analysis in the vehicle will allow prompt enforcement of violators spreading hazardous wastes under the guise of road oiling.

2. More Stringent: The Cabinet could have chosen to be more stringent by requiring additional provisions for road oiling and road treatment with waste or used oils. However, the current proposal is adequate to protect public health and the environment.

3. Present proposal: The present proposal requires waste oil spreaders to carry a copy of the waste analysis results in the truck and prohibits even ignitable wastes from being used as dust suppressions or road treatments.

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None

(a) Necessity of proposed regulation if in conflict: Not applicable.

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: Not applicable.

(6) Any additional information or comments: The impact of this regulation has not been analyzed for those requirements which are equivalent to those found in the corresponding federal regulations, 40 CFR 266.20, 266.21, 266.22, and 266.23. The impact of the federal program was analyzed in 50 FR 1978-2006 and 28702-28755, January 4, 1985 and July 15, 1985. A copy of the January 4, 1985 and July 15, 1985 federal registers have been filed with the regulations compiler of the Legislative Research Commission.

Tiering:

Was tiering applied? Yes. This regulation applies only to recycling which constitutes disposal.

NATURAL RESOURCES AND
ENVIRONMENTAL PROTECTION CABINET
Department for Environmental Protection
Division of Waste Management

**401 KAR 36:040. Hazardous waste burned for energy recovery.**

RELATES TO: KRS 224.033, 224.830 through 224.877, 224.994
PURSUANT TO: KRS Chapter 13A, 224.033, 224.866
NECESSITY AND FUNCTION: KRS 224.866 requires that persons engaging in recycling of hazardous waste obtain a permit. KRS 224.866 requires the cabinet to establish standards for these permits, to require adequate financial responsibility, and to establish minimum standards for closure for all hazardous waste recycling facilities. This chapter establishes minimum standards for hazardous waste recycling facilities. This regulation establishes minimum standards for hazardous waste burned for energy recovery.

Section 1. Applicability. (1) The requirements in this regulation apply to hazardous wastes that are burned for energy recovery in any boiler or industrial furnace that is not regulated under 401 KAR 34:240 or 401 KAR 35:240, except as provided by subsection (2) of this section. Such hazardous wastes burned for energy recovery are termed "hazardous waste fuel." However, hazardous waste fuels produced from hazardous waste by blending or other treatment by a person who neither generated the waste nor burns the fuel are not subject to regulation at the present time.
(2) The following hazardous wastes are not regulated under the provisions of this regulation:
(a) Used oil burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in 401 KAR Chapter 31; and
(b) Hazardous wastes that are exempt from regulation under the provisions of Section 4 of 401 KAR 31:010 and hazardous wastes that are subject to the special requirements for small quantity generators under the provisions of Section 5 of 401 KAR 31:010.

Section 2. Prohibitions. (1) Except as provided in subsection (2) of this section, no fuel which contains any hazardous waste may be burned in any cement kiln which is located within the boundaries of any incorporated municipality with a population greater than 500,000 (based on the most recent census statistics) unless such kiln fully complies with regulations that are applicable to incinerators.
(2) This requirement does not apply to petroleum refinery hazardous wastes containing oil which are converted into petroleum coke at the same facility at which such wastes were generated, unless the resulting coke product would exceed one (1) or more of the characteristics of hazardous waste in 401 KAR Chapter 31.

Section 3. Standards Applicable to Generators of Hazardous Waste Fuel. (1) Generators of hazardous waste fuel are subject to the requirements of 401 KAR Chapter 32 except that Section 7 of this regulation exempts certain spent materials and by-products from these provisions;
(2) Generators who are marketers also must comply with Section 5 of this regulation; and
(3) Generators who are burners also must comply with Section 6 of this regulation.

Section 4. Standards Applicable to Transporters of Hazardous Waste Fuel. (1) Transporters of hazardous waste fuel from a generator to a marketer, or from a generator to a burner are subject to the requirements of 401 KAR Chapter 33, except that Section 7 of this regulation exempts certain spent materials and by-products from these provisions.
(2) Transporters of hazardous waste fuel are not presently subject to regulation when they transport hazardous waste fuel from marketers, who are not also the generators of the waste, to burners or other marketers.

Section 5. Standards Applicable to Marketers of Hazardous Waste Fuel. Persons who market hazardous waste fuel are called "marketers." Marketers include generators who market hazardous waste fuel directly to a burner, and persons who receive hazardous waste from generators and produce, process, or blend hazardous waste fuel from these hazardous wastes. Persons who distribute but do not process or blend hazardous waste fuel are also marketers, but are not presently subject to regulation. Marketers (other than distributors) are subject to the following requirements:
(1) Prohibitions. There are currently no prohibitions relating to marketers of hazardous waste fuel.
(2) Storage.
(a) Marketers who are generators are subject to the requirements of Section 5 of 401 KAR 32:030, 401 KAR 34:010 through 401 KAR 34:210, 401 KAR 35:010 through 401 KAR 35:210, and 401 KAR Chapter 38, except as provided by Section 7 of this regulation for certain spent materials and by-products; and
(b) Marketers who received hazardous wastes from generators, and produce, process, or blend hazardous waste fuel from these hazardous wastes, are subject to regulation under all applicable provisions of 401 KAR 34:010 through 34:210, 401 KAR 35:010 through 35:210, and 401 KAR Chapter 38, except as provided by Section 7 of this regulation for certain spent materials and by-products.
(3) Labeling.
(a) Except as provided in paragraphs (b) through (d) of this subsection, after February 6, 1985, it shall be unlawful for any person who produces, distributes, or markets any fuel that contains a hazardous waste to distribute or market such fuel if the invoice or the bill of sale fails:
1. To bear the following statement: "WARNING: THIS FUEL CONTAINS HAZARDOUS WASTE;" and
2. To list the hazardous wastes contained therein. Such statement must be located in a conspicuous place on every such invoice or bill of sale and must appear in conspicuous and legible type in contrast by typography, layout, or color with other printed matter on the invoice or bill of sale.
(b) This requirement does not apply to fuels produced from petroleum refining hazardous waste containing oil if:
1. Such materials are generated and reinserted on-site into the refining process;

2. Contaminants are removed; and

3. Such refining waste containing oil is converted along with normal process streams into petroleum-derived fuel products at a facility at which crude oil is refined into petroleum products and which is classified as a number SIC 2911 facility under the Office of Management and Budget Standard Industrial Classification Manual.

(c) This requirement does not apply to fuels produced from oily materials resulting from normal petroleum refining production and transportation practices; if:

1. Contaminants are removed; and

2. Such oil materials are converted along with normal process streams into petroleum-derived fuel products at a facility at which crude oil is refined into petroleum products and which is classified as a number SIC 2911 facility under the Office of Management and Budget Standard Industrial Classification Manual.

(d) This requirement does not apply to petroleum refinery hazardous wastes containing oil which are converted into petroleum coke at the same facility at which such wastes were generated, unless the resulting coke product would exceed one (1) or more of the characteristics of hazardous waste in 401 KAR Chapter 31.

Section 6. Standards Applicable to Burners of Hazardous Waste Fuel. (1) Notification. Any person who burns hazardous waste fuels shall notify the cabinet in accordance with Section 2 of 401 KAR 34:020.

(2) Burners that store hazardous waste fuel prior to burning are subject to the requirements of Section 5 of 401 KAR 32:030 or to all applicable requirements in 401 KAR 34:010 through 401 KAR 34:210, 401 KAR 35:010 through 401 KAR 35:210, and 401 KAR Chapter 38 with respect to such storage, except as provided by Section 7 of this regulation for certain spent materials and by-products.

Section 7. Conditional Exemption for Spent Materials and By-products Exhibiting a Characteristic of Hazardous Waste. (1) Except as provided in subsection (2) of this section, hazardous waste fuels that are spent materials and by-products and that are hazardous only because they exhibit a characteristic of hazardous waste are not subject to the notification requirements of KRS 224.864, Section 2 of 401 KAR 33:010 and Section 2 of 34:020, or the generator, transporter, or storage requirements of 401 KAR Chapters 30 through 39.

(2) This exemption does not apply when the spent material or by-product is stored in a surface impoundment prior to burning.

CHARLOTTE E. BALDWIN, Secretary

APPROVED BY AGENCY: November 12, 1985

FILED WITH LRC: November 13, 1985 at 3 p.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 30, 1985, at 1 p.m. EST, in the Capital Plaza Tower. Any persons interested in attending this hearing shall submit by December 26, 1985, a written statement of such interest to: J. Alex Barber, Director, Division of Waste Management, 18 Reilly Road, Frankfort, Kentucky 40601. If no statement of interest is received by close of business on December 26, 1985, the hearing on this regulation may be cancelled. Written comments may also be submitted to the address above. Written comments will be accepted until the end of the comment period, which will be close of business on December 30, 1985.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: J. Alex Barber, Director

(1) Type and number of entities affected: There are fewer than 10 facilities in Kentucky who may be affected by this proposed regulation.

(a) Direct and indirect costs or savings to those affected:

1. First year: Burners of hazardous waste fuel will be required to register and obtain an EPA ID Number (see Regulatory Impact Analysis for 401 KAR 39:080) which will cost a small amount for completing the form and $200 for registration. In addition, burners who also store hazardous waste fuels on site will be required to obtain a permit. Although this will result in a cost to the facility, a net savings will be realized due to improved management of the hazardous waste as the result of the permit standards.

2. Continuing costs or savings: See note in (1)(a)1 above.

3. Additional factors increasing or decreasing costs (note any effects upon competition): See note in (1)(a)1 above.

(b) Reporting and paperwork requirements: None. See note in (1)(a)1 above.

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: Negligible. The increased workload on the promulgating agency will be minimal due to the limited number of affected facilities.

2. Continuing costs or savings: None. See note in (2)(a)1 above.

3. Additional factors increasing or decreasing costs: None. See note in (2)(a)1 above.

(b) Reporting and paperwork requirements:

(3) Assessment of anticipated effect on state and local revenues: There will be no effect on local revenues from promulgation of this regulation. See Regulatory Impact Analysis for 401 KAR 39:080 for the effect on state revenues.

(4) Assessment of alternative methods; reasons why alternatives were rejected:

(a) The proposed regulation adopts standards for hazardous waste being burned for energy recovery which are identical to the federal requirements promulgated on January 4, 1985, April 11, 1985, July 15, 1985, and August 20, 1985.

Alternative:

1. Less stringent: The cabinet could have chosen not to adopt the federal standards. However, this would have afforded Kentucky's public health and the environment less protection than that provided by the national program.

2. More stringent: The cabinet could have chosen to adopt standards which are more stringent than the federal. However, the present proposal is adequate to protect public health and the environment.

3. Present proposal: The present proposal adopts the federal language from 40 CFR 266, Subpart D verbatim.

(b) The proposed regulation includes a requirement that burners of hazardous waste fuel register with the cabinet.

Alternatives:
1. Less stringent: The Cabinet could have chosen not to require registration. However, this would have meant that the cabinet would not be aware of the existence of individuals who burn hazardous waste for fuel. Because this would reduce the likelihood that the cabinet would discover improper hazardous waste management at a facility which burns hazardous waste fuel, the cabinet chose to adopt a registration requirement.
2. More Stringent: The cabinet could have chosen to adopt additional, more stringent requirements for hazardous waste fuel burners. However, the present proposal is adequate to protect human health and the environment.
3. Present Proposal: The present proposal requires hazardous waste fuel burners to register.
(c) The proposed regulation requires burners of hazardous waste fuels to obtain a permit if they store the fuel before burning.
1. Less Stringent: The cabinet could have chosen not to require a permit for storage. However, marketers who store hazardous waste fuel are required to obtain a permit for storage, and the cabinet believes it is equitable and appropriate to require a permit for burners.
2. More Stringent: The cabinet could have been more stringent by establishing additional standards for burners who store. However, the present proposal is adequate to protect public health and the environment.
3. Present Proposal: The present proposal requires hazardous waste fuel burners to obtain a storage permit, if they store on-site prior to burning.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict: Not applicable.
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: Not applicable.
(6) Any additional information or comments: The impact of this regulation has not been analyzed for those requirements which are equivalent to those found in the corresponding federal regulations, 40 CFR 266.30, 266.31, 266.32, 266.33, 266.34, 266.35 and 266.36. The impact of the federal program was analyzed in 50 FR 614-668, January 4, 1985; 50 FR 14216-14220, April 11, 1985; 50 FR 28702-28755, July 15, 1985; and 50 FR 33541-33543, August 20, 1985. A copy of the January 4, 1985; April 11, 1985; and July 15, 1985 federal registers have been filed with the regulations compiler of the Legislative Research Commission.

Tiering:
Was tiering applied? Yes. This regulation applies only to generators, transporters, marketers, storers and facilities that burn hazardous waste fuel.

## NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
## Department for Environmental Protection
## Division of Waste Management

**401 KAR 36:060. Recyclable materials used for precious metal recovery.**

RELATES TO: KRS 224.033, 224.830 through 224.877, 224.994
PURSUANT TO: KRS Chapter 13A, 224.033, 224.866
NECESSITY AND FUNCTION: KRS 224.866 requires that persons engaging in recycling of hazardous waste obtain a permit. KRS 224.866 requires the cabinet to establish standards for these permits, to require adequate financial responsibility, and to establish minimum standards for closure for all hazardous waste recycling facilities. This chapter establishes minimum standards for hazardous waste recycling facilities. This regulation establishes minimum standards for recyclable materials which are reclaimed to recover economically significant amounts of precious metals.

Section 1. Applicability. The requirements of this regulation apply to recyclable materials that are reclaimed to recover economically significant amounts of gold, silver, platinum, paladium, irridium, osmium, rhodium, ruthenium, or any combination of these.

Section 2. Requirements. (1) Persons who generate, transport or store recyclable materials that are subject to this regulation are subject to the following requirements:
(a) Notification requirements under KRS 224.864 and Section 3 of 401 KAR 32:010 (for generators); Section 2 of 401 KAR 33:010 (for transporters); and Section 2 of 401 KAR 34:020 (for persons who store).
(b) 401 KAR 32:020 (for generators), 401 KAR 33:020, Section 1 (for transporters); 401 KAR 35:050, Sections 2 and 3 (for persons who store);
(2) Persons who store recycled materials that are subject to this regulation must keep the following records to document that they are not accumulating these materials speculatively (as defined in 401 KAR 31:010, Section 1(3)):
(a) Records showing the volume of these materials stored at the beginning of the calendar year;
(b) The amount of these materials generated or received during the calendar year; and
(c) The amount of materials remaining at the end of the calendar year.
(3) Recyclable materials that are subject to this regulation that are accumulated speculatively (as defined in 401 KAR 31:010, Section 1(3)) are subject to all applicable provisions of 401 KAR Chapters 32, 33, 34, 35, 38, and 39.
(4) Persons who recycle materials that are subject to this regulation are subject to the notification requirements under 401 KAR 35:020, Section 2 and 401 KAR 34:020, Section 2.

CHARLOTTE E. BALDWIN, Secretary
APPROVED BY AGENCY: November 12, 1985
FILED WITH LRC: November 13, 1985 at 3 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 30, 1985, at 1 p.m. EST, in the Capital Plaza Tower. Any persons interested in attending this hearing shall submit by December 26, 1985, a written

statement of such interest to: J. Alex Barber, Director, Division of Waste Management, 18 Reilly Road, Frankfort, Kentucky 40601. If no statement of interest is received by close of business on December 26, 1985, the hearing on this regulation may be cancelled. Written comments may also be submitted to the address above. Written comments will be accepted until the end of the comment period, which will be close of business on December 30, 1985.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: J. Alex Barber, Director

(1) Type and number of entities affected: This regulation will affect those companies generating, transporting, storing or recycling precious metal wastes for recycling. Although there is no estimate of the actual number of companies affected, it is presumed that the primary impact of this regulation will be for companies sending photographic and x-ray film for precious metal recovery.

(a) Direct and indirect costs or savings to those affected:

1. First year: None. See item (6) Any Additional Information or Comments.

2. Continuing costs or savings: None

3. Additional factors increasing or decreasing costs (note any effects upon competition): None

(b) Reporting and paperwork requirements: Recyclers will be required to register with the cabinet. This will require submittal of a registration form. See item (6) Any Additional Information or Comments.

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: Negligible costs will be incurred by regulating this category of hazardous waste handler.

2. Continuing costs or savings: Negligible. See note in (2)(a)1 above.

3. Additional factors increasing or decreasing costs: None.

(b) Reporting and paperwork requirements:

(3) Assessment of anticipated effect on state and local revenues: There will be no effect on state or local revenues from promulgation of this regulation.

(4) Assessment of alternative methods; reasons why alternatives were rejected:

(a) The federal standards for precious metal recovery were adopted verbatim in this regulation

Alternative:

1. Less stringent: The cabinet could have chosen to adopt standards which were less stringent than the federal standards. However, this would have provided less protection to public health and the environment than that provided by the established national standards.

2. More stringent: The cabinet could have chosen to adopt standards which are more stringent than the federal standards. However, the federal standards are sufficient to protect public health and the environment without being burdensome or restrictive of recycling activities.

3. Present proposal: The cabinet felt that adoption of the federal standards for recovery of precious metals would be adequate to protect public health and the environment.

(b) Recyclers are required to register with the cabinet.

Alternative:

1. Less stringent: The Cabinet could have chosen not to require registration of recyclers. However, this would have meant that precious metal wastes would be regulated until they reach a recycler. By requiring registration, the cabinet will be made aware of the recycler and be able to monitor the facility for environmental problems.

2. More Stringent: The cabinet could have chosen to impose additional standards on recyclers of precious metals. However, because the state wishes to encourage beneficial recycling of hazardous wastes and because the federal government chose not to impose standards for this type of recycling, the cabinet chose not to exercise this option.

3. Present Proposal: The present proposal requires recyclers to register with the cabinet.

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None

(a) Necessity of proposed regulation if in conflict: Not applicable.

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: Not applicable.

(6) Any additional information or comments: The impact of this regulation has not been analyzed for those requirements which are equivalent to those found in the corresponding federal regulation, 40 CFR 266.70. The impact of the federal program was analyzed in 50 FR 614-668, January 4, 1985. A copy of the January 4, 1985 federal register has been filed with the regulations compiler of the Legislative Research Commission.

Tiering:

Was tiering applied? Yes. The standards in this regulation apply only to those persons engaged in generating, transporting, storing, speculatively accumulating, and recycling wastes containing precious metals for recovery.

## NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
## Department for Environmental Protection
## Division of Waste Management

**401 KAR 36:070. Spent lead-acid batteries being reclaimed.**

RELATES TO: KRS 224.033, 224.830 through 224.877, 224.994

PURSUANT TO: KRS Chapter 13A, 224.033, 224.866

NECESSITY AND FUNCTION: KRS 224.866 requires that persons engaging in recycling of hazardous waste obtain a permit. KRS 224.866 requires the cabinet to establish standards for these permits, to require adequate financial responsibility, and to establish minimum standards for closure for all hazardous waste recycling facilities. This chapter establishes minimum standards for hazardous waste recycling facilities. This regulation establishes standards for persons who reclaim spent lead-acid batteries that are recyclable materials.

Section 1. Applicability. The requirements in this regulation apply to persons who reclaim spent lead-acid batteries that are recyclable materials ("spent batteries"). Persons who generate, transport, or collect spent batteries,

or who store spent batteries but do not reclaim them are not subject to regulation under 401 KAR Chapters 32 through 38, except as provided in Section 2 of this regulation, and also are not subject to the requirements of KRS 224.864.

Section 2. Facility Requirements. (1) Owners or operators of facilities that store spent batteries before reclaiming them are subject to the following requirements:

(a) Notification requirements under 401 KAR 34:020, Section 2;

(b) All applicable provisions in 401 KAR 34:010, 401 KAR 34:020 (but not Section 4 of 401 KAR 34:020 (waste analysis)), 401 KAR 34:030, 401 KAR 34:040, 401 KAR 34:050 (but not Section 2 or 3 of 401 KAR 34:050 (dealing with the use of the manifest and manifest discrepancies)), and 401 KAR 34:060 through 401 KAR 35:210.

(c) All applicable provisions in Subparts 401 KAR 35:010, 401 KAR 35:020 (but not Section 4 of 401 KAR 35:020 (waste analysis)), 401 KAR 35:030, 401 KAR 35:040, 401 KAR 35:050 (but not Section 2 or 3 of 401 KAR 35:050 (dealing with use of the manifest and manifest discrepancies)), and 401 KAR 35:060 through 401 KAR 35:220.

(d) All applicable provisions in 401 KAR Chapter 38.

(2) Owners or operators of facilities that reclaim spent batteries, but do not store them before reclaiming them are subject to notification requirements under 401 KAR 34:020, Section 2, and 401 KAR 35:020, Section 2.

CHARLOTTE E. BALDWIN, Secretary

APPROVED BY AGENCY: November 12, 1985

FILED WITH LRC: November 13, 1985 at 3 p.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 30, 1985, at 1 p.m. EST, in the Capital Plaza Tower. Any persons interested in attending this hearing shall submit by December 26, 1985, a written statement of such interest to: J. Alex Barber, Director, Division of Waste Management, 18 Reilly Road, Frankfort, Kentucky 40601. If no statement of interest is received by close of business on December 26, 1985, the hearing on this regulation may be cancelled. Written comments may also be submitted to the address above. Written comments will be accepted until the end of the comment period, which will be close of business on December 30, 1985.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: J. Alex Barber, Director

(1) Type and number of entities affected: There are 6 Kentucky companies who may be affected by the proposed rule.

(a) Direct and indirect costs or savings to those affected:

1. First year: None. See note in item (6) Any Additional Information or Comments.

2. Continuing costs or savings: None. See note in item (6) Any Additional Information or Comments.

3. Additional factors increasing or decreasing costs (note any effects upon competition): None. See note in item (6) Any Additional Information or Comments.

(b) Reporting and paperwork requirements: Owners or operators of facilities spent lead acid batteries must register with the cabinet. This will require submittal of a registration form. In addition, see note in item (6) Any Additional Information or Comments.

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: None. The requirements in this regulation will not have a significant impact on the promulgating administrative body.

2. Continuing costs or savings: None. See note in (2)(a)1 above.

3. Additional factors increasing or decreasing costs: None. See note in (2)(a)1 above.

(b) Reporting and paperwork requirements:

(3) Assessment of anticipated effect on state and local revenues: There will be no effect on state or local revenues from promulgation of this regulation.

(4) Assessment of alternative methods; reasons why alternatives were rejected:

(a) The cabinet chose to adopt the federal requirements for spent lead-acid batteries verbatim.

Alternative:

1. Less stringent: The cabinet could have chosen to be less stringent. However, this alternative would have made the Kentucky program inconsistent with the federal program. It would have afforded less protection to public health and the environment than that provided by the national program.

2. More stringent: The cabinet could have chosen to be more stringent. However, the proposed provisions are adequate to protect public health and the environment.

3. Present proposal: The cabinet chose to adopt the federal provisions identically.

(b) Recyclers are required to register with the cabinet.

Alternative:

1. Less stringent: The Cabinet could have chosen not to require registration of recyclers. However, this would have meant that only facilities which store lead-acid batteries prior to recycling would be subject to requirements. Since there is a potential for environmental damage from spilled battery acid, the cabinet chose to require all lead-acid battery recyclers to register. By requiring registration, the cabinet will be made aware of the recycler and be able to monitor the facility for environmental problems.

2. More Stringent: The cabinet could have chosen to impose additional standards on recyclers of lead-acid batteries. However, because the state wishes to encourage beneficial recycling of hazardous wastes and because the federal government chose not to impose standards for this type of recycling, the cabinet chose not to exercise this option.

3. Present Proposal: The present proposal requires recyclers to register with the cabinet.

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None

(a) Necessity of proposed regulation if in conflict: Not applicable.

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: Not applicable.

(6) Any additional information or comments: The impact of this regulation has not been analyzed for those requirements which are equivalent to those found in the corresponding federal regulation, 40 CFR 266.80. The impact of the federal program was analyzed in 50 FR

614-668, January 4, 1985. A copy of the January 4, 1985 federal register has been filed with the regulations compiler of the Legislative Research Commission.

Tiering:
Was tiering applied? Yes. This regulation applies only to facilities that recycle lead-acid batteries.

**NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET**
**Department for Environmental Protection**
**Division of Waste Management**

**401 KAR 39:080. Recycling fees.**

RELATES TO: KRS 224.033, 224.830 through 224.877, 224.994
PURSUANT TO: KRS Chapter 13A, 224.033, 224.871
NECESSITY AND FUNCTION: KRS 224.033(20) states that the cabinet may provide by regulation for a reasonable schedule of fees for the cost of processing applications for permits, exemptions, and partial exemptions. KRS 224.871 requires the cabinet to promulgate regulations requiring the payment of reasonable fees for hazardous waste registration certificates and permits. The purpose of this chapter is to establish a fee schedule for hazardous waste management. This regulation establishes the fee schedule for permits for recyclers of hazardous waste.

Section 1. Applicability. This regulation applies to all persons considered to be recyclers in accordance with the criteria contained in Section 1 of 401 KAR 35:010 and 401 KAR Chapter 36.

Section 2. Schedule of Fees for Recycling. A fee shall be required in order to register as a recycler of hazardous wastes. The fee to register as a hazardous waste recycler is $200.

Section 3. Submittal of Fees. The required fees shall be submitted to the cabinet with the permit application. All checks should be made payable to the Kentucky State Treasurer.

CHARLOTTE E. BALDWIN, Secretary
APPROVED BY AGENCY: November 12, 1985
FILED WITH LRC: November 13, 1985 at 3 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 30, 1985, at 1 p.m. EST, in the Capital Plaza Tower. Any persons interested in attending this hearing shall submit by December 26, 1985, a written statement of such interest to: J. Alex Barber, Director, Division of Waste Management, 18 Reilly Road, Frankfort, Kentucky 40601. If no statement of interest is received by close of business on December 26, 1985, the hearing on this regulation may be cancelled. Written comments may also be submitted to the address above. Written comments will be accepted until the end of the comment period, which will be close of business on December 30, 1985.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: J. Alex Barber, Director
(1) Type and number of entities affected: This regulation affects hazardous waste recyclers in the state, eight of which have notified the cabinet.
(a) Direct and indirect costs or savings to those affected:
1. First year: There will be a direct cost of $200 per hazardous waste recycler for their initial registration.
2. Continuing costs or savings: None.
3. Additional factors increasing or decreasing costs (note any effects upon competition): None.
(b) Reporting and paperwork requirements: Recyclers will be required to fill out a registration form and submit it to the cabinet.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: The $200 registration fee will cover the cost of reviewing and processing the registration and therefore, the cabinet should not incur any additional costs.
2. Continuing costs or savings: None.
3. Additional factors increasing or decreasing costs: None.
(b) Reporting and paperwork requirements:
(3) Assessment of anticipated effect on state and local revenues: All fees collected from this regulation will go directly into the General Fund to be rebudgeted in the following fiscal year. There will no effect on local revenues from promulgation of this regulation.
(4) Assessment of alternative methods; reasons why alternatives were rejected:
(a) $200 registration fee
Alternative:
1. Less stringent: If Kentucky had chosen to charge less for the review of the registration application, the fee would not cover the cost of the review.
2. More stringent: It was unnecessary for Kentucky to charge more for review because $200 would cover the review expense.
3. Present proposal: The present fee of $200 was chosen because it fairly represents the review costs. KRS 224.871 requires the cabinet to promulgate fee regulations equaling the cost of review.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict: Not applicable.
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: Not applicable.
(6) Any additional information or comments: None.

Tiering:
Was tiering applied? Yes. This regulation applies to hazardous waste recyclers only.

**NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET**
**Department for Environmental Protection**
**Division of Waste Management**

**401 KAR 42:010. General provisions for underground storage tanks.**

RELATES TO: KRS 224.033(27), 224.862(3), (4)
PURSUANT TO: KRS Chapter 13A, 224.033(4), (5), (22) through (25)
NECESSITY AND FUNCTION: KRS 224.033 requires the Natural Resources and Environmental Protection Cabinet to develop and conduct

programs which provide for the prevention, abatement and control of contaminants which may threaten the environment. This chapter identifies requirements for underground storage tanks. This regulation prohibits installing tanks which are not protected against corrosion and provides for a notification process for identification of all underground storage tanks.

Section 1. Applicability. This regulation applies to all owners or operators of underground storage tanks as defined in Section 2 of this regulation. The provisions of this regulation also apply to persons who deposit regulated substances into underground storage tanks or sell underground storage tanks.

Section 2. Definitions. When used in this chapter the following terms shall have the meanings given below:

(1) "Person" has the same meaning as provided in 401 KAR 30:010, Section 1, except that such term includes a consortium, a joint venture, and a commercial entity.

(2) "Regulated substance" means:

(a) Any substance defined in Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (but not including any substance regulated as a hazardous waste under 401 KAR Chapters 30 through 39); and

(b) Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (sixty (60) degrees Fahrenheit and 14.7 pounds per square inch absolute).

(3) "Release" means any spilling, leaking, emitting, discharging, escaping, leaching, or disposing from an underground storage tank into ground water, surface water, or subsurface soils.

(4) "Underground storage tank" means any one (1) or combination of tanks (including underground pipes connected thereto) which is used to contain an accumulation of regulated substances, and the volume of which (including the volume of the underground pipes connected thereto) is ten (10) per centum or more beneath the surface of the ground. Such term does not include any:

(a) Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;

(b) Tank used for storing heating oil for consumptive use on the premises where stored;

(c) Septic tank;

(d) Pipeline facility (including gathering lines):

1. Regulated under the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.); or

2. Regulated under the Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.); or

3. Which is an intrastate pipeline facility regulated under KRS 278.470, et seq., and 278.992, or other applicable state laws.

(e) Surface impoundment, pit, pond, or lagoon;

(f) Storm water or wastewater collection system;

(g) Flow-through process tank;

(h) Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or

(i) Storage tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor; and

(j) Any pipes connected to any tank which is described in paragraphs (a) through (i) of this subsection.

Section 3. Interim Prohibition. (1) No person may install an underground storage tank for the purpose of storing regulated substances unless such tank (whether of single or double wall construction):

(a) Will prevent release due to corrosion or structural failure for the operational life of the tank;

(b) Is cathodically protected against corrosion, constructed of noncorrosive material, steel clad with a noncorrosive material, designed in a manner to prevent the release or threatened release of any stored substance; and

(c) The material used in the construction or lining of the tank is compatible with the substance to be stored.

(2) Notwithstanding subsection (1) of this section, if soil tests conducted in accordance with ASTM Standard G57-78, or another standard approved by the cabinet, show that soil resistivity in an installation location is 12,000 ohm-cm or more (unless a more stringent standard is prescribed by the cabinet), a storage tank without corrosion protection may be installed in that location upon approval by the cabinet.

Section 4. Notification Requirements. (1) On or before May 8, 1986, each owner of an underground storage tank currently in use must submit, on a form designated by the cabinet, a notice of the existence of such tank to the cabinet.

(2) On or before May 8, 1986, each owner of an underground storage tank taken out of operation after January 1, 1974 (unless the owner knows that such tank has been permanently removed from the ground), must submit on a form designated by the cabinet, a notice of the existence of such tank to the cabinet.

(3) Any owner that brings an underground storage tank into use after May 8, 1986, must, within thirty (30) days of bringing such tank into use, submit on a form designated by the cabinet, a notice of the existence of such tank to the cabinet.

(4) Owners required to submit notices under subsections (1) through (3) of this section must provide notices to the cabinet for each tank they own. Owners may provide notice for several tanks using one (1) notification form but owners who own more than one (1) place of operation within Kentucky must file a separate notification form for each separate place of operation.

(5) Notices required to be submitted under subsections (1) through (3) of this section must provide all of the information indicated on the prescribed form for each tank for which notice must be given.

(6) Beginning thirty (30) days after the promulgation of this rule, and for eighteen (18) months thereafter, any person who deposits regulated substances in an underground storage tank must make reasonable efforts to notify the owner or operator of such tank of the owner's obligations under subsections (1) through (3) of this section.

(7) Beginning thirty (30) days after the

cabinet issues new tank performance standards pursuant to KRS Chapter 224, any person who sells a tank intended to be used as an underground storage tank must notify the purchaser of such tank of the owner's notification obligations under subsections (1) through (3) of this section.

CHARLOTTE E. BALDWIN, Secretary
APPROVED BY AGENCY: November 12, 1985
FILED WITH LRC: November 13, 1985 at 3 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 30, 1985, at 1 p.m. EST, in the Capital Plaza Tower. Any persons interested in attending this hearing shall submit by December 26, 1985, a written statement of such interest to: J. Alex Barber, Director, Division of Waste Management, 18 Reilly Road, Frankfort, Kentucky 40601. If no statement of interest is received by close of business on December 26, 1985, the hearing on this regulation may be cancelled. Written comments may also be submitted to the address above. Written comments will be accepted until the end of the comment period, which will be close of business on December 30, 1985.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: J. Alex Barber, Director
(1) Type and number of entities affected: This regulation affects all owners or operators of underground storage tanks, except those listed as exemptions. There are an estimated 16,000 underground storage tanks throughout the Commonwealth.
(a) Direct and indirect costs or savings to those affected:
1. First year: A minimum amount of time and cost will be involved in filling out the required Notification Form. Tank owners or operators will have to install those tanks which are specifically designed to prevent corrosion. In the short term, this may result in substantial costs (e.g., if inadequate tanks need to be retrofitted); in the long run, tank owners will save in terms of keeping their products from leaking, reducing fire hazards from leaking products, and preserving the environment. Savings will also be realized in fewer/smaller clean up costs as tanks will be more closely monitored for leaks.
2. Continuing costs or savings: See note in (1)(a)1.
3. Additional factors increasing or decreasing costs (note any effects upon competition): Inventory and recordkeeping practices will ultimately save the tank owner or operator in protecting the storage of product.
(b) Reporting and paperwork requirements: None. A Notification Form including information about number, size, location; type, etc., of tanks, must be filled out by tank owners and filed with the state.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: The state is required to commit 5% matching funds to the federal allocation of funds, which will total $7,750.00 (federal allocation is $125,000).
2. Continuing costs or savings: Additional manpower costs will be necessary to expand the program to include inspections for leaks and corrective action. In terms of protecting the Commonwealth's groundwater supplies, the savings will be substantial.
3. Additional factors increasing or decreasing costs: If tank owners do not comply with the regulation, the state will have to expend additional dollars for enforcement.
(b) Reporting and paperwork requirements:
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected:
(a) This regulation requires that the Commonwealth's groundwater supplies be protected against leaking underground storage tanks.
Alternative:
1. Less stringent: The cabinet could have chosen not to adopt this program and let the federal government be responsible for protecting the Commonwealth's groundwaters from leaking underground storage tanks. However, federal regulations call for the Governor of each state to designate an agency. Further, it is felt that a state administered program will assure closer contact with the affected entities and ultimately, a more successful record of compliance.
2. More stringent: The cabinet could have required more protection measures than those outlined in the federal guidelines. However, it is felt that the federal guidelines are adequate.
3. Present proposal: The present proposal requires that all tank owners or operators notify the state of the existence of underground storage tanks and prohibits installing tanks which have not been specifically protected against corrosion. The Cabinet feels this regulation meets the intention of the federal guidelines and the state's mandate to protect groundwater.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict: Not applicable.
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: Not applicable.
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes. This regulation applies only to owners or operators of underground storage tanks containing petroleum and other hazardous substances defined under the Comprehensive Environmental Response, Compensation and Liability Act of 1980.

## CORRECTIONS CABINET

**501 KAR 6:020. Corrections policies and procedures.**

RELATES TO: KRS Chapters 196, 197, 439
PURSUANT TO: KRS 196.035, 197.020, 439.470, 439.590, 439.640
NECESSITY AND FUNCTION: KRS 196.035, 197.020, 439.470, 439.590, and 439.640 authorize the secretary to adopt, amend or rescind regulations necessary and suitable for the proper administration of the cabinet or any division therein. These regulations are in conformity with those provisions.

Section 1. Pursuant to the authority vested in the Corrections Cabinet the following policies and procedures are incorporated by reference on November 15, 1985 and hereinafter should be referred to as Corrections Policies and Procedures or institutional policies and procedures. Copies of the procedures may be obtained from the Office of the General Counsel, Corrections Cabinet, State Office Building, Frankfort, Kentucky 40601.

(1) The corrections policies and procedures:

1.1 Legal Assistance for Corrections Staff
1.2 News Media
1.6 Extraordinary Occurrence Reports
1.11 Population Counts and Reporting Procedures
2.1 Inmate Canteen
3.1 Code of Ethics
3.2 Inclement Weather and Emergency Conditions Policy
3.3 Holding of Second Jobs by Bureau Employees
3.7 Employment of Relatives
3.10 Staff Clothing and Personal Appearance
3.12 Institutional Staff Housing
3.14 Corrections Cabinet Payroll Deduction Policy and Procedure
4.1 Attendance at Professional Meetings
4.2 Staff Training and Development
4.3 Firearms and Chemical Agents Training
4.4 Educational Assistance Program
6.1 Open Records Law
8.4 Emergency Preparedness
9.1 Use of Force
9.3 Transportation of Convicted Offenders
9.4 Transportation of Inmates to Funerals or Bedside Visits
9.5 Return of Escapees by Automobile
9.6 Contraband
9.7 Storage, Issue and Use of Weapons Including Chemical Agents
9.8 Search Policy
9.9 Transportation of Inmates
9.10 Security Inspections
9.15 Institutional Entry and Exit Policy and Procedures
9.18 Informants
10.1 Inmates Serving a Sentence of Death
10.2 Special Management Inmates
10.3 Safekeepers
10.4 Special Needs Inmates
11.2 Nutritional Adequacy of the Diet for Inmates
11.3 Special Diet Procedures
12.1 Resident Clothing
13.1 Pharmacy Policy and Formulary
13.2 Health Maintenance Services
13.3 Medical Alert System
13.4 Health Program Audits
14.2 Personal Hygiene Items
14.3 Marriage of Inmates
14.4 Legal Services Program
15.1 Hair and Grooming Standards
15.2 Offenses and Penalties
15.3 Meritorious Good Time
15.4 Governor's Meritorious Good Time Award
15.5 Restoration of Forfeited Good Time
15.6 Adjustment Procedures and Programs
16.1 General Inmate Visiting Procedure
16.2 Inmate Correspondence
16.3 Telephone Calls
17.1 Inmate Personal Property
17.2 Assessment Center Operations
17.3 Controlled Intake of Inmates
18.4 Classification of the Inmate
18.5 Custody/Security Guidelines
18.6 Classification Document
18.7 Transfers
18.8 Guidelines for Transfers Between Institutions
18.9 Out-of-State Transfers
18.10 Pre-Parole Progress Reports
18.11 Kentucky Correctional Psychiatric Center Transfer Procedures
18.12 Referral Procedure for Inmates Adjudicated Guilty But Mentally Ill
18.13 Population Categories
19.1 Government Services Projects
19.2 Community Services Projects
20.1 Study Release
20.6 Vocational Study Release
22.1 Privilege Trips
25.1 Gratuities
25.2 Public Official Notification of Release of an Inmate
25.3 Pre-Release
25.4 Inmate Furloughs
25.6 Community Center Program
25.7 Expedient Release
25.8 Extended Furloughs
27.1 Supervision: Case Classification
27.2 Risk/Needs Administration
27.4 Supervision Plan: General
27.8 Travel Restrictions
27.9 Conditions of Supervision
27.10 Preliminary Revocation Procedures
27.11 Apprehension and Transportation of Violators of Probation, Parole and Conditional Release
27.12 Fugitive Section/Probation and Parole
27.13 Supervision Fee
27.18 Absconder Procedures
27.19 Technical Violators
27.20 Intensive Supervision
28.2 Investigations: General
28.3 Pre-Sentence Investigations (To the Court)
28.4 Pre-Parole (Pre-Sentence) Investigation (To the Institution and State Parole Board)
28.5 Special Report to the Parole Board
28.7 Out-of-State Investigations

(2) The Kentucky State Reformatory Procedures Memorandum:

KSR 01-00-09 Public Information and News Media Relations
KSR 01-00-10 Entry Authorization for All Cameras and Tape Recorders Brought into the Institution
KSR 01-00-14 Extraordinary Occurrence Report
KSR 01-00-15 Cooperation and Coordination with Oldham County Court
KSR 01-00-18 Assistant Duty Officers
KSR 01-00-19 Personal Service Contract Personnel
KSR 02-00-01 Inmate Canteen
KSR 02-00-03 Screening Disbursements from Inmate Personal Accounts
KSR 02-00-11 Inmate Personal Accounts
KSR 02-00-12 Institutional Funds and Issuance of Checks
KSR 03-00-01 Shift Assignment/Reassignment
KSR 03-00-02 Employee Dress and Personal Appearance
KSR 03-00-05 Intra-Agency Promotional Opportunity Announcements
KSR 03-00-06 Employee Time and Attendance
KSR 03-00-07 Travel Expense Reimbursement
KSR 03-00-08 Employee Tuition Assistance Reimbursement
KSR 03-00-10 Workers' Compensation

KSR 03-00-11 Equal Employment Opportunity Complaints
KSR 03-00-12 Employee Greivance Procedure
KSR 03-00-14 Prohibited Employee Conduct, Disciplinary Actions, and Appeals Process
KSR 03-00-15 Affirmative Action Program
KSR 03-00-16 Confidentiality of Personnel Records
KSR 03-00-19 Establishment of Personnel Records and Employee Right to Challenge Information Contained Therein
KSR 03-00-20 Personnel Selection, Retention and Promotion
KSR 03-00-21 Equal Employment Opportunities for Institutional Job Assignments and Job Classification Promotions
KSR 03-00-23 Work Planning and Performance Review (WPPR)
KSR 03-00-24 Inclement Weather and Employee Work Attendance
KSR 03-00-25 Medical Examination Requirements for New Employees
KSR 04-00-02 Staff Training and Development
KSR 05-00-02 Research Activities
KSR 05-00-03 Management Information Systems
KSR 06-00-01 Inmate Master File
KSR 06-00-02 Records Audit
KSR 06-00-03 Security of Inmate Records
KSR 07-00-02 Institutional Tower Room Regulations
KSR 07-00-03 Guidelines for Contractors
KSR 08-00-07 Inmate Family Emergency - Life Threatening Illness or Death in Inmate's Immediate Family
KSR 08-00-08 Notification of Inmate Family in Case of Serious Injury, Critical Medical Emergency, Major Surgery, or Death of an Inmate
KSR 08-00-09 Emergency Preparedness Training
KSR 09-00-04 Horizontal Gates/Box 1 Enter and Exit Procedure
KSR 09-00-05 Gate I Entrance and Exit Procedure
KSR 09-00-14 Use of Force
KSR 09-00-21 Crime Scene Camera
KSR 09-00-22 Collection, Preservation, and Identification of Physical Evidence
KSR 09-00-23 Drug Abuse Testing
KSR 09-00-25 Inmate Motor Vehicle Operator's License
KSR 10-00-02 Special Management Inmates - Operations, Rules and Regulations for Unit D
KSR 10-00-03 Special Needs Unit
KRS 10-00-04 Unit D Admission/Release Ticket
KSR 11-00-01 Meal Planning for the General Population
KSR 11-00-02 Special Diets
KSR 11-00-03 Food Service Inspections
KSR 11-00-04 Dining Room Dress Code for Inmates
KSR 11-00-06 Health Standards/Regulations for Food Service Employees
KSR 11-00-07 Early Chow Line Passes for Medically Designated Inmates
KSR 12-00-01 Inmate Summer Dress Regulations
KSR 12-00-02 Sanitation and General Living Conditions
KSR 12-00-03 State Items Issued to Inmates
KSR 12-00-07 Regulations for Inmate Barbershop
KSR 13-00-01 Identification of Mentally Retarded Inmates
KSR 13-00-02 Regulations for Hospital Patients
KSR 13-00-03 Medication for Inmates Leaving Institution Grounds
KSR 13-00-04 Dental Care for Inmates
KSR 13-00-05 Medical and Dental Sick Call
KSR 13-00-06 Services for Mentally Retarded Inmates
KSR 13-00-07 Referral of Inmates Considered to Have Severe Emotional Disturbances
KSR 13-00-08 Institutional Laboratory Procedures
KSR 13-00-09 Institutional Pharmacy Procedures
KSR 13-00-10 Requirements for Medical Personnel
KSR 13-00-11 Preliminary Health Evaluation and Establishment of Inmate Medical Record
KSR 13-00-12 Vision Care/Optometry Services
KSR 13-00-14 Periodic Health Examinations for Inmates
KSR 13-00-15 Medical Alert System
KSR 13-00-16 Suicide Prevention and Intervention Program
KSR 14-00-01 Inmate Rights
KSR 14-00-02 A/C Center and Unit D Inmate Access to Legal Aide Services
KSR 14-00-04 Inmate Grievance Procedure
KSR 15-00-01 Operational Procedures and Rules and Regulations for Unit A, B, and C
KSR 15-00-02 Regulations Prohibiting Immate Control or Authority Over Other Inmate(s)
KSR 15-00-03 Governor's Meritorious Good Time Award
KSR 15-00-04 Restoration of Forfeited Good Time
KSR 15-00-05 Differential Status for SU (QUIT) Inmates
KSR 15-00-06 Inmate I.D. Cards
KSR 15-00-07 Inmate Rules and Discipline - Adjustment Committee Procedures
KSR 16-00-01 Visiting Regulations
KSR 16-00-02 Inmate Correspondence and Mailroom Operations
KSR 16-00-03 Inmate Access to Telephones
KSR 17-00-01 Housing Unit Assignment
KSR 17-00-03 Notifying Inmates' Families of Admission and Procedures for Mail and Visiting
KSR 17-00-04 Assessment/Classification Center Operations, Rules and Regulations
KSR 17-00-05 Dormitory 10 Operations
KSR 17-00-06 Identification Department Admissions and Discharge Procedures
KSR 17-00-07 Inmate Personal Property
KSR 18-00-01 Special Management Inmates - Unit D Classification
KSR 18-00-04 Returns from Other Institutions
KSR 18-00-05 Transfer of Residents to Kentucky Correctional Psychiatric Center
KSR 18-00-06 Classification
KSR 19-00-01 Inmate Work Incentives
KSR 19-00-02 On-the-Job Training Program
KSR 19-00-03 Safety Inspections of Inmate Work Assignment Locations
KSR 20-00-01 Vocational School Referral and Release Process
KSR 20-00-03 Academic School Programs
KSR 20-00-04 Criteria for Participation in Jefferson Community College Program
KSR 20-00-08 Integration of Vocational and Academic Education Programs
KSR 21-00-01 Legal Aide Office and Law Library Services and Supervision
KSR 21-00-02 Inmate Library Services
KSR 21-00-03 Library Services for Unit D
KSR 22-00-03 Inmate Organizations
KSR 23-00-02 Chaplain's Responsibility and Inmate Access to Religious Representatives
KSR 23-00-03 Religious Programming
KSR 25-00-01 Discharge of Residents to Hospital or Nursing Home

KSR 25-00-02 Violations of Law or Code of Conduct by Inmates on Parole Furlough
KSR 25-00-03 Pre-Parole Progress Report

(3) The Kentucky State Penitentiary Operations Memorandum:

KSP 000000-06 Administrative Regulations
KSP 010000-04 Public Information and Media Communication
KSP 020000-01 General Guidelines for KSP Employees
KSP 020000-02 Service Regulations, Attendance, Hours of Work, Accumulation and Use of Leave
KSP 020000-03 Work Planning and Performance Review (WPPR)
KSP 020000-04 Employee Disciplinary Procedure
KSP 020000-05 Proper Dress for Uniformed and Non-Uniformed Personnel
KSP 020000-06 Employee Grievance Procedure
KSP 020000-07 Personnel Registers and Advertisements
KSP 020000-09 Maintenance, Confidentiality, and Informational Challenge of Material Contained in Personnel Files
KSP 020000-10 Overtime Policy
KSP 020000-15 Legal Assistance
KSP 020000-20 Equal Employment Opportunity Complaints
KSP 020000-23 Recruitment and Employment of Ex-Offenders
KSP 020000-24 Educational Assistance Program
KSP 020000-25 Mediation and Appeal Procedure for WPPR
KSP 020000-29 Promotional Opportunity Announcement Program
KSP 030000-01 Inventory Records and Control
KSP 030000-04 Requisition and Purchase of Supplies and Equipment
KSP 030000-05 Inmate Personal Funds
KSP 030000-06 Inmate Commissary Program
KSP 040000-02 Inmate Records Section
KSP 040000-08 Inmate Equal Opportunity Policy
KSP 050000-14 Searches of Inmates, Visitors, Staff, Vehicles, Cells and Area Shakedown and Preservation of Evidence
KSP 060000-01 Telephones
KSP 060000-02 Operational Procedures for Disciplinary Segregation, Administrative Segregation, Administrative Control and Behavioral Control Units
KSP 060000-04 Operational Procedures for Special Management Inmates Assigned to Protective Custody
KSP 060000-11 Criteria for Disciplinary Segregation and Incentive Time Reduction Program
KSP 060000-12 Maximum Protective Custody
KSP 070000-01 Hospital Services
KSP 070000-02 Sick Call
KSP 070000-03 Health Evaluations
KSP 070000-04 Consultations
KSP 070000-05 Emergency Medical Procedure
KSP 070000-13 Pharmacy Procedures
KSP 070000-14 Medical Records
KSP 070000-16 Psychiatric and Psychological Services
KSP 070000-17 Dental Services for Special Management Units
KSP 070000-19 Optometric Services
KSP 070000-20 Menu Preparation and Planning
KSP 070000-24 Food Service, General Sanitation, Safety, and Protection Standards and Requirements
KSP 070000-25 Food Service Inspections
KSP 070000-30 Therapeutic Diets
KSP 090000-01 Inmate Work Programs
KSP 090000-03 Correctional Industries
KSP 100000-02 Visiting Program
KSP 100000-03 Disposition of Unauthorized Property
KSP 100000-04 Inmate Grooming and Dress Code
KSP 100000-05 Procedures for Providing Clothing, Linens and Other Personal Items
KSP 100000-06 Mail
KSP 100000-07 Inmate Telephone Access
KSP 100000-08 Behavioral Counseling Record
KSP 100000-09 Due Process/Disciplinary Procedures
KSP 100000-11 Authorized and Unauthorized Property for Inmates
KSP 100000-14 Property Room: Clothing Storage and Inventory
KSP 100000-15 Uniform Standards for Fire Safety, Sanitation and Security of all Cells
KSP 100000-18 Inmate Grievance Committee Hearings
KSP 100000-20 Legal Services Program
KSP 100000-21 Photocopies for Non-Indigent Inmates with Special Court Deadlines
KSP 100000-22 Special Management Unit Legal Services Program
KSP 100000-24 Resident Legal Services Office Library
KSP 100000-25 WKFC Resident - Access to Kentucky State Penitentiary Legal Library
KSP 110000-03 Governor's Meritorious Good Time Award Committee
KSP 110000-04 Pre-Parole Progress Report
KSP 110000-06 General Guidelines of the Classification Committee
KSP 110000-07 Statutory Good Time Restoration
KSP 110000-08 Award of Meritorious Good Time
KSP 110000-10 Special Needs Inmates
KSP 110000-11 Classification Committee - Transfer Requests
KSP 110000-12 Classification Committee - Inmate Work Assignments
KSP 110000-13 Classification Document
KSP 110000-14 Vocational School Placement
KSP 110000-15 Transfers to Kentucky Correctional Psychiatric Center (KCPC)
KSP 110000-16 Consideration of Further Treatment Requirements for Inmates Prior to Release
KSP 110000-19 Custody/Security Guidelines
KSP 120000-04 Academic Education
KSP 120000-07 Community Center Program
KSP 120000-08 Inmate Furloughs
KSP 120000-11 Religious Services - Staffing
KSP 120000-18 Religious Services - Religious Programming
KSP 120000-20 Marriage of Inmates
KSP 120000-24 Muslim Services
KSP 120000-31 Extended Furloughs
KSP 120000-32 Discharge of Inmates by Shock Probation
KSP 130000-10 Execution Plan

(4) The Luther Luckett Correctional Complex Policies and Procedures:

| | |
|---|---|
| LLCC 01-08-01 | Institutional Legal Assistance |
| LLCC 01-09-01 | Public Information and News Media Access |
| LLCC 01-12-01 | Duty Officer Responsibilities |
| LLCC 02-01-02 | Fiscal Management: Accounting Procedures |
| LLCC 02-01-03 | Fiscal Management: Agency Funds |
| LLCC 02-01-04 | Fiscal Management: Insurance |
| LLCC 02-03-01 | Fiscal Management: Audits |
| LLCC 02-06-01 | Property Inventory |
| LLCC 03-01-01 | General Guidelines for LLCC Employees |
| LLCC 03-01-02 | Service Regulations, Attendance Accumulation and use of Leave |
| LLCC 03-02-01 | Proper Dress for Uniformed Personnel |
| LLCC 03-03-01 | Employee Grievance Mechanism |
| LLCC 03-04-01 | Employee Records |
| LLCC 03-05-01 | Personnel Registers |
| LLCC 03-06-01 | Work Planning: Employee Evaluations and Evaluation Control |
| LLCC 03-08-01 | Shift Transfers |
| LLCC 03-08-02 | Rotation of Correctional Officers Between Central Security and Unit Management Staff |
| LLCC 03-09-01 | Promotion Board |
| LLCC 03-10-01 | Affirmative Action: EEO |
| LLCC 03-12-01 | Confidentiality of Information Roles and Services of Consultants, Contract Personnel and Volunteers |
| LLCC 08-01-01 | Offender Records |
| LLCC 08-04-01 | Storage of Expunged Records |
| LLCC 10-03-09 | Duties and Responsibilities of Building 1 and 2 Officer |
| LLCC 11-03-01 | LLCC Population Categories |
| LLCC 11-07-01 | Adjustment Procedures for Minor Rule Violations |
| LLCC 11-09-01 | Rules and Regulations of the Unit |
| LLCC 11-13-01 | Inmate Dress and Use of Access Areas |
| LLCC 11-15-01 | Post-Parole Furloughs |
| LLCC 11-16-01 | Restoration of Forfeited Good Time |
| LLCC 11-18-02 | Use of Monitor Telephone |
| LLCC 11-19-01 | Unit Shakedowns/Control of Excess Property |
| LLCC 11-20-01 | Program Services for "Special Needs"/Mentally Ill Inmates |
| LLCC 12-01-01 | Special Management Inmates |
| LLCC 12-04-01 | Guidelines for (7E) PC Unit/General Living Conditions |
| LLCC 13-04-01 | Food Service: Meals |
| LLCC 13-04-02 | Food Service: Menu, Nutrition and Special Diets |
| LLCC 13-05-02 | Medical Screening of Food Handlers |
| LLCC 13-06-01 | Food Service: Inspections and Sanitation |
| LLCC 13-07-01 | Food Service: Purchasing, Storage and Farm Products |
| LLCC 14-01-01 | Sanitation, Living Condition Standards, and Cloting Issue |
| LLCC 14-05-01 | Institutional Inspections |
| LLCC 15-01-01 | Health Maintenance Services; Sick Call and Pill Call |
| LLCC 15-02-01 | Mental Health/Psychological Services |
| LLCC 15-03-01 | Pharmacy |
| LLCC 15-03-02 | Use of Psychotropic Medications |
| LLCC 15-04-01 | Dental Services |
| LLCC 15-05-02 | Licensure and Training Standards |
| LLCC 15-06-02 | Specialized Health Services |
| LLCC 15-06-03 | Emergency Medical/Dental Care Services |
| LLCC 15-06-04 | First Aid/CPR Training Program |
| LLCC 15-06-05 | Suicide Prevention and Intervention Program |
| LLCC 15-07-01 | Health Records |
| LLCC 15-08-01 | Special Diets |
| LLCC 15-12-01 | Special Needs Unit |
| LLCC 15-14-01 | Informed Consent |
| LLCC 15-15-01 | Medical Restraints |
| LLCC 15-16-01 | Health Education/Special Health Programs |
| LLCC 16-01-01 | Inmate Rights and Responsibilities |
| LLCC 16-02-01 | Inmate Grievance Procedure |
| LLCC 16-03-01 | Inmate Legal Services |
| LLCC 17-01-01 | Due Process/Disciplinary Procedure |
| LLCC 18-01-01 | Inmate Correspondence |
| LLCC 18-02-01 | Inmate Visiting |
| LLCC 18-02-03 | Extended Visit and Furloughs |
| LLCC 18-03-03 | Inmate Visiting (DSU/ASU) |
| LLCC 20-01-01 | Personal Property Control |
| LLCC 20-02-01 | Authorized Inmate Personal Property |
| LLCC 20-03-01 | Unauthorized Items |
| LLCC 20-04-02 | Inmate Canteen |
| LLCC 20-05-01 | Inmate Control of Personal Funds |
| LLCC 20-05-02 | Storage and Disposition of Monies Received on Weekends, Holidays, and Between 4 p.m. and 8 a.m. Weekdays |
| LLCC 20-06-01 | Procedure for Sending Appliances to Outside Dealers for Repair |
| LLCC 21-02-01 | Classification/Security Levels |
| LLCC 21-03-01 | Classification Process |
| LLCC 22-01-01 | OJT/Job Assignments |
| LLCC 23-01-01 | Academic School |
| LLCC 26-01-01 | Religious Services |
| LLCC 28-01-01 | Privileged Trips |
| LLCC 28-03-01 | Temporary Release/Community Center Release |
| LLCC 28-04-01 | Pre-Parole Progress Report |
| LLCC 28-04-02 | Parole Eligibility Dates |

(5) The Northpoint Training Center Policies and Procedures:

| | |
|---|---|
| NTC 01-05-01 | Extraordinary Occurrence Reports |
| NTC 01-10-01 | Legal Assistance for Staff |
| NTC 01-11-01 | Political Activities of Merit Employees |
| NTC 01-15-01 | Establishment of the Warden as Chief Executive Officer |
| NTC 01-17-01 | Relationships with Public, Media and Other Agencies |
| NTC 02-01-02 | Fiscal Management: Accounting Procedures |
| NTC 02-01-03 | Fiscal Management: Checks |
| NTC 02-01-04 | Fiscal Management: Insurance |
| NTC 02-03-01 | Fiscal Management: Audits |
| NTC 02-08-01 | Inmate Canteen |
| NTC 03-01-01 | Employee Dress Code |
| NTC 03-02-01 | General Guidelines for NTC Employees |
| NTC 03-03-01 | Staff Members Suspected of Being Under the Influence of Intoxicants |
| NTC 03-04-01 | Shift Assignments and Transfers |
| NTC 03-05-01 | Work Planning and Performance Review |
| NTC 03-06-01 | Worker's Compensation |
| NTC 03-07-01 | Merit System Registers and Placement of Advertisements |
| NTC 03-08-02 | Employee Identification Cards |

| | |
|---|---|
| NTC 03-09-01 | Maintenance, Confidentiality and Challenge of Information Contained in Employee Personnel File |
| NTC 03-10-01 | Employment of Ex-Offenders |
| NTC 03-13-01 | Travel Reimbursement for Official Business and Professional Meetings |
| NTC 03-14-01 | Selection, Retention, Promotion, and Lateral Transfer of Merit System Employees |
| NTC 03-14-02 | Promotional Opportunities |
| NTC 03-15-01 | Time and Attendance; Accumulation and Use of Accrued Time |
| NTC 03-15-02 | Sick Leave Abuse |
| NTC 03-15-03 | Inclement Weather and Emergency Conditions |
| NTC 03-16-01 | EEO - Affirmative Action |
| NTC 03-17-01 | Employee Grievance Procedure |
| NTC 03-17-02 | Review Committee |
| NTC 03-18-01 | Educational Assistance Program |
| NTC 03-19-01 | Holding of Second Jobs by Employees |
| NTC 04-01-01 | Training and Staff Development |
| NTC 06-01-01 | Offender Records |
| NTC 06-01-02 | Records - Release of Information |
| NTC 06-01-03 | Taking Offender Record Folders onto the Yard |
| NTC 08-05-01 | Duties of Fire Safety Officer |
| NTC 08-05-02 | Fire Procedures |
| NTC 08-05-03 | Fire Prevention |
| NTC 08-05-04 | Storage of Flammables and Dangerous Chemicals and Their Use |
| NTC 08-05-05 | Control of Flammables, Toxic, Caustic, and Other Hazardous Chemicals and Janitorial Supplies |
| NTC 10-01-01 | Special Management Inmates |
| NTC 10-01-02 | Legal Aide Visits for Special Management Inmates |
| NTC 11-03-01 | Food Services: General Guidelines |
| NTC 11-04-01 | Food Service: Meals |
| NTC 11-04-02 | Menu, Nutrition and Special Diets |
| NTC 11-05-02 | Medical Screening of Food Handlers |
| NTC 11-06-01 | Inspections and Sanitation |
| NTC 11-07-01 | Purchasing, Storage and Farm Products |
| NTC 12-01-01 | Institutional Inspections |
| NTC 12-02-01 | Personal Hygiene for Inmates; Clothing and Linens |
| NTC 12-02-02 | Personal Hygiene Items |
| NTC 13-01-01 | Emergency Medical Care Plan |
| NTC 13-01-02 | Emergency and Specialized Health Services |
| NTC 13-03-01 | Sick Call and Pill Call |
| NTC 13-04-01 | Pharmacy |
| NTC 13-05-01 | Dental Services |
| NTC 13-06-01 | Licensure and Training Standards |
| NTC 13-08-01 | Medical and Dental Records |
| NTC 13-09-01 | Special Diets |
| NTC 13-11-01 | Inmate Health Evaluation |
| NTC 13-12-01 | Disabled and Infirm Inmates |
| NTC 13-13-01 | Medical Alert System |
| NTC 14-01-01 | Legal Services Program |
| NTC 14-02-01 | Inmate Grievance Procedure |
| NTC 14-03-01 | Inmate Rights and Responsibilities |
| NTC 15-01-01 | Restoration of Forfeited Good Time |
| NTC 15-02-01 | Due Process/Disciplinary Procedures |
| NTC 15-02-02 | Extra Duty Assignments |
| NTC 15-03-01 | Rules for Inmates Assigned to Outside Detail |
| NTC 15-03-02 | Rules and Regulations for Dormitories |
| NTC 15-04-01 | Inmate Identification |
| NTC 16-01-01 | Mail Regulations |
| NTC 16-02-01 | Visiting |
| NTC 16-02-02 | Extended and Special Visits |
| NTC 16-02-03 | Honor Dorm Visiting |
| NTC 16-03-01 | Inmate Furloughs |
| NTC 16-05-01 | Telephone Use and Control |
| NTC 17-01-01 | Personal Property Control |
| NTC 17-01-02 | Authorized Inmate Personal Property |
| NTC 17-01-03 | Unauthorized Inmate Property |
| NTC 17-01-04 | Disposition of Unauthorized Property |
| NTC 17-03-01 | Orientation |
| NTC 18-01-01 | Pre-Parole Progress Report |
| NTC 18-01-02 | Parole Eligibility Dates |
| NTC 18-02-01 | Classification |
| NTC 18-05-01 | Transfers to Other Institutions |
| NTC 19-01-01 | Inmate Work Program |
| NTC 20-01-01 | Academic School Program |
| NTC 21-01-01 | Library Services |
| NTC 22-03-01 | Conducting Inmate Organizational Meetings and Programs |
| NTC 23-01-01 | Religious Services |
| NTC 23-03-01 | Marriage of Inmates |
| NTC 24-04-01 | Honor Status |
| NTC 24-05-01 | Unit Management |
| NTC 25-01-01 | Release Preparation Program |
| NTC 25-01-02 | Temporary Release/Community Center Release |
| NTC 25-02-01 | Funeral Trips and Bedside Visits |
| NTC 25-03-01 | Inmate Release Procedure |
| NTC 26-01-02 | Certification of Volunteers and Guests |

(6) The Kentucky Correctional Institution for Women Policies and Procedures:

| | |
|---|---|
| KCIW 01-06-01 | Legal Assistance for Corrections Staff |
| KCIW 01-08-01 | News Media Access |
| KCIW 02-01-01 | Comprehensive Insurance Coverage |
| KCIW 02-02-01 | Fiscal Management: Audits |
| KCIW 02-02-03 | Fiscal Management: Checks |
| KCIW 02-03-01 | Inventory Control of Non-Expendable Personal Property |
| KCIW 02-03-03 | Criteria for Selection of Bidders and Vendors |
| KCIW 02-04-01 | Accounting Procedures |
| KCIW 02-05-01 | Inmate Canteen/Staff Canteen |
| KCIW 02-07-01 | Release of C.E.T.A. Money Earned |
| KCIW 03-01-01 | Travel Expense Reimbursement |
| KCIW 03-02-01 | General Orders for all Staff |
| KCIW 03-03-01 | Employee Grievance Procedure |
| KCIW 03-05-01 | Employee Personnel File |
| KCIW 03-06-01 | Affirmative Action EEO and the Equal Employment Opportunity Complaint Procedure |
| KCIW 03-08-01 | Employee Performance Evaluations |
| KCIW 03-09-01 | Payroll and Personnel Manning Records |
| KCIW 03-10-01 | Promotion Committee |
| KCIW 03-11-01 | Personnel Registers |
| KCIW 03-12-01 | Criminal History Checks on all Personnel and the Recruitment and Employment of Ex-Offenders |
| KCIW 06-01-01 | Inmate Records |
| KCIW 06-01-02 | Transfers to Community Centers and the Minimum Security Unit |
| KCIW 06-01-03 | Storage of Expunged Records |
| KCIW 10-01-01 | Special Management Unit: General Operation and Regulations |
| KCIW 10-01-02 | Special Management Unit Programs, Placement and Review |
| KCIW 11-01-01 | Food Service Operation Inspections |
| KCIW 11-01-02 | Budgeting, Accounting, and Purchasing Procedures for Food Products |

| | |
|---|---|
| KCIW 11-02-01 | Menu Preparation/Special Diets |
| KCIW 11-03-01 | General Guidelines for Food Service Operations Manager |
| KCIW 11-03-02 | General Guidelines for Food Service Workers |
| KCIW 11-04-01 | Health Standards, Regulations for Food Service Employees |
| KCIW 12-01-01 | Control of Pests and Vermin |
| KCIW 12-02-01 | Laundry Facilities/Clothing Issuance |
| KCIW 12-02-03 | Donated Items |
| KCIW 12-04-01 | Sanitation and General Living Conditions |
| KCIW 13-01-01 | Provision of Medical and Dental Care |
| KCIW 13-01-02 | Preliminary Health Screening and Appraisal |
| KCIW 13-01-03 | Use of Pharmaceutical Products |
| KCIW 13-03-01 | Emergency Care |
| KCIW 13-03-02 | Infirmary Care and Outside Services |
| KCIW 13-03-03 | Outside Hospital Security |
| KCIW 13-04-01 | Medical Alert System |
| KCIW 13-04-02 | Psychiatric/Psychological Services |
| KCIW 13-06-01 | Informed Consent |
| KCIW 13-07-01 | Detoxification and Alcohol or Chemical Dependency Guidelines |
| KCIW 13-08-01 | Medical Exams for New Employees |
| KCIW 14-01-02 | Inmate Rights |
| KCIW 14-02-01 | Access to Attorneys and Designated Counsel Substitutes |
| KCIW 14-03-01 | Inmates Are Not Subject to Discrimination Based on Race, Religion, National Origin, Sex, Handicap, or Political Beliefs |
| KCIW 14-04-01 | Inmate Grievance Procedure |
| KCIW 15-01-01 | Offenses and Penalties |
| KCIW 15-01-02 | Adjustment Committee Procedures and Programs |
| KCIW 15-03-01 | Inmate Rule Book |
| KCIW 15-04-01 | Incentive Levels System |
| KCIW 16-01-01 | Inmate Correspondence |
| KCIW 16-01-02 | Inmate Mail Distribution |
| KCIW 16-01-03 | Staff Mail |
| KCIW 16-02-01 | Inmate Access to Telephone |
| KCIW 16-02-02 | Intra-Institution Phone Calls |
| KCIW 16-03-01 | Inmate Visiting Regulations |
| KCIW 16-03-02 | Unauthorized Items for Picnic Lunches, Food Packages and Regular Packages |
| KCIW 16-04-01 | Inmate Indigent Fund |
| KCIW 16-05-01 | Vendor Packages, Appliance Orders and Drug Store Orders |
| KCIW 17-01-01 | Assessment Center Operation and Reception Programs |
| KCIW 17-01-02 | Assessment/Classification Center Operations, Rules and Regulations |
| KCIW 17-01-03 | Assessment and Classification Unit Property Guidelines |
| KCIW 17-02-01 | Identification Department Admissions |
| KCIW 17-03-01 | Notifying Inmates Families of Admission and Procedures for Mail and Visiting |
| KCIW 17-05-01 | Inmate Personal Property |
| KCIW 18-01-02 | Institution Housing Assignments |
| KCIW 18-02-01 | Classification Procedures |
| KCIW 18-05-01 | Special Needs Inmates |
| KCIW 18-06-01 | Status Codes |
| KCIW 19-01-01 | Inmate Work/Program Assignments |
| KCIW 19-03-01 | Landscape and Maintenance Work Details |
| KCIW 20-01-01 | Education Programs |
| KCIW 20-01-03 | Vocational Education: Curriculum Flexible Schedule, up-grade programs and release preparation program |
| KCIW 20-01-04 | Entry - Exit Vocational School |
| KCIW 20-01-05 | Vocational Programs: Approved, assessed and contain guidelines for vocational records |
| KCIW 20-01-06 | Vocational Education: Staffing patterns/requirements |
| KCIW 20-01-07 | Vocational Counselor |
| KCIW 20-01-08 | Vocational Education: Community Resources and the integration with academic progress |
| KCIW 20-01-09 | Vocational Education: Support Equipment |
| KCIW 20-01-10 | Control of Flammable, Hazardous, Toxic and Caustic Materials in the Vocational Area |
| KCIW 22-01-04 | Inmate Club Activities |
| KCIW 23-01-01 | Religious Services |
| KCIW 25-01-01 | Pre-Parole Progress Report |
| KCIW 25-02-01 | Temporary Release/Community Center |
| KCIW 25-02-02 | Furloughs |
| KCIW 25-03-01 | Escorted Leave into the Community |

(7) The Food Service Manual, Offender Records Manual, Classification Manual and Livestock Procedures Manual are hereby approved by the Secretary of the Corrections Cabinet as authorized by KRS 196.035, 197.020, 439.470, 439.590 and 439.640.

GEORGE W. WILSON, Secretary
APPROVED BY AGENCY: November 15, 1985
FILED WITH LRC: November 15, 1985 at 10 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m. at the Auditorium in the State Office Building. Those interested in attending this hearing shall notify in writing: Barbara Jones, Office of General Counsel, 5th Floor, State Office Building, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Barbara W. Jones
(1) Type and number of entities affected: 2,033 employees of the Corrections Cabinet, 4,665 inmates, 428 parolees, 112 probationers, and all visitors to state correctional institutions.
(a) Direct and indirect costs or savings to those affected:
1. First year: None
2. Continuing costs or savings: None
3. Additional factors increasing or decreasing costs (note any effects upon competition): None
(b) Reporting and paperwork requirements: None
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: None. All of the costs involved with the implementation of the regulation are included in the operational budget.
2. Continuing costs or savings: Same as (2)(a)1.
3. Additional factors increasing or decreasing costs: Same as (2)(a)1.
(b) Reporting and paperwork requirements: Weekly submission of policy revisions.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons

why alternatives were rejected: None
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments: None

Tiering:
Was tiering applied? No. All policies are administered in a uniform manner.

**EDUCATION AND HUMANITIES CABINET**
**Department for Libraries and Archives**

**725 KAR 2:020. Certification of public librarians.**

RELATES TO: KRS 171.230 to 171.300
PURSUANT TO: KRS Chapter 13A, 171.250, 171.260
NECESSITY AND FUNCTION: Certification of public librarians is mandated by KRS 171.250 and 171.260. These regulations define the requirements for certification of public librarians in Kentucky.

Section 1. Definitions. (1) Hereinafter, the term, "board" refers to the Kentucky State Board for the Certification of Librarians.
(2) "Accredited schools" are colleges and library science departments accredited by regional associations, and library science schools accredited by the American Library Association.
(3) "Workshops" are instructional library programs of at least two (2) weeks' duration, provided under the auspices of a professional library organization, a college library, an accredited school or a state library agency for which college credit is earned; or a series of one (1) day instructional library programs provided under the auspices of a professional library organization, a library institution, an accredited school or a state library agency.

Section 2. Certificates. (1) There shall be four (4) certificates granted by the board.
(2) A Professional Certificate requires a master's degree in library science from an accredited school, or a bachelor's degree, with at least twenty-one (21) hours of library science, from an accredited school and is valid for five (5) years.
(3) A Paraprofessional Certificate requires either two (2) years of college training, twelve (12) hours of library science and two (2) years of library experience; or, fifteen (15) hours of library science and five (5) years of library experience and is valid for five (5) years.
(4) A Library Experience Certificate requires a high school diploma or G.E.D. equivalency with either fifteen (15) hours in library science; or, twelve (12) hours in library science and three (3) hours in a related field of study; or, five (5) library science workshops (of two (2) week duration); or, six (6) hours in library science and ten (10) years library experience; or, a bachelor's degree and six (6) hours in library science and is valid for three (3) years.
(5) A Temporary Certificate may be issued to persons who do not have requirements needed for other certification. The Temporary Certificate is valid for one (1) year from date of issuance and may be renewed four (4) times.

Section 3. Certificate Required. (1) Library directors employed by public libraries serving more than 15,000 population shall hold or obtain the Professional Certificate.
(2) Library directors employed by public libraries serving less than 15,000 population shall hold or obtain at least the Paraprofessional Certificate.
(3) Assistant librarian, bookmobile, branch and/or department heads shall hold or obtain at least the Paraprofessional Certificate.
(4) All other full-time personnel providing library information services as defined by local library policy shall hold or obtain at least the Library Experience Certificate.

Section 4. Certificate Renewal. Certificates may be renewed upon application to the board. Beginning January 1, 1991, persons renewing the Professional and Paraprofessional Certificate must obtain ten (10) certification points and persons renewing the Library Experience Certificate must obtain three (3) certification points before obtaining subsequent renewals. Procedures for obtaining certification points are contained in the "Kentucky Certification and Recertification Manual for Public Librarians" which may be obtained from the Department for Libraries and Archives, P.O. Box 537, Frankfort, Kentucky 40602.

Section 5. Forms. Applications for library certification and renewals should be made to the board. Forms may be obtained from the office at the Department for Libraries and Archives, P.O. Box 537, Frankfort, Kentucky 40602.

Section 6. Fees. A fee of five (5) dollars shall be charged for all certificates issued.

Section 7. Voluntary Certification. Appropriate certificates shall be issued to voluntary applicants who meet the requirements and submit the required fee. No certificates will be issued to persons above the age of seventy (70).

JAMES A NELSON, State Librarian and Commissioner
APPROVED BY AGENCY: November 1, 1985
FILED WITH LRC: November 1, 1985 at 2 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 21, 1985, at 1 p.m., EST in the Board Room of the Kentucky Department for Libraries and Archives, Frankfort, Kentucky. Those interested in attending this hearing shall contact: Betty Taylor, Recording Secretary, Kentucky State Board for the Certification of Librarians, 300 Coffee Tree Road, Frankfort, Kentucky 40602.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Ellen Hellard
(1) Type and number of entities affected: 116 public library systems, approximately 400 library personnel.
(a) Direct and indirect costs or savings to those affected:
1. First year: Approximately $2,000 @ $5.00 per certificate (cost to applicant).

2. Continuing costs or savings: Renewals are scheduled once every 5 years at approximately $2,000.
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements: An application must be submitted and record of activities during the five year period must be kept for renewal of certificate.
(2) Effects on the promulgating administrative body: To DLA.
(a) Direct and indirect costs or savings:
1. First year: Approximately $500 cost.
2. Continuing costs or savings: Approximately $500 cost per year.
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements: Issuance of certificate, file of applications maintained, notification of certificate expiration.
(3) Assessment of anticipated effect on state and local revenues:
(4) Assessment of alternative methods; reasons why alternatives were rejected: The alternative is not to require certification which is contradictory to statutes and does not assure qualified library personnel to serve the public.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments:

Tiering:
Was tiering applied? Yes

## KENTUCKY STATE UNIVERSITY
### Board of Regents

**745 KAR 1:010. Acquisition and disbursement of funds.**

RELATES TO: KRS 164A.560, 164A.565
PURSUANT TO: KRS 164A.560
NECESSITY AND FUNCTION: KRS 164A.560 permits governing boards of each public institution of higher education to elect to perform financial management functions per KRS 164A.555 to 164A.630 by issuing regulations to do so. These regulations implement the provision of KRS 164A.560 and KRS 164A.565 at Kentucky State University. The scheduled implementation date of this regulation is July 1, 1986.

Section 1. The Board of Regents of Kentucky State University elects to receive, deposit, collect, retain, invest, disburse, and account for all funds received or due from any source including, but not limited to, state and federal appropriations for the support or maintenance of the general operations or special purpose activities of Kentucky State University.
(1) The treasurer of the university shall deposit, on a timely basis, all tuition fees, fees for room and board, incidental fees, contributions, gifts, donations, devises, state and federal appropriations, monies received from sales and services, admittance fees, and all other monies received from any source, in a depository bank or banks designated by the Board of Regents.
(2) All disbursements shall be limited to the amounts and for the purpose for which state appropriations have been made, or for which other monies have been received. All disbursements shall be recorded in a system of accounts as set forth in these regulations. The treasurer of the university shall prescribe forms to be used with the system of accounts, and no official shall approve any disbursement document unless he determines that the disbursement is to satisfy a liability of the institution incurred for authorized purposes and that the disbursement is to be made from the unexpended balance of a proper allotment.
(3) These functions of the treasurer may be carried out by the Vice President for Business Affairs and such directors, assistant directors, accountants, and cashiers as the president may authorize in writing in accord with sound business practices.

Section 2. The accounting system of Kentucky State University shall be an accrual basis accounting system conforming with generally accepted accounting principles and procedures established for colleges and universities by the National Association of College and University Business Officers and the American Institute of Certified Public Accountants. The accounting system shall include, but not be limited to, the following fund structure:
(1) An operating fund group (unrestricted current funds), consisting of all monies not otherwise restricted, available for general operations including state appropriations, federal funds, and unrestricted institutional receipts. Separate accounting fund groups may be established for auxiliary enterprises, and other similar operations.
(2) A restricted fund group consisting of appropriations and other receipts restricted as to purpose which shall not be included in the operating fund.
(3) A loan fund group consisting of gifts, grants, and other funds provided and available for loans to students.
(4) An agency fund group consisting of resources held by the institution as custodian or fiscal agent for individual students, faculty, staff members and organizations.
(5) A plant fund group consisting of:
(a) Unexpended plant funds to be used for the acquisition of long lived assets for institutional purposes (capital construction funds);
(b) Funds for renewal, maintenance, and replacement of institutional buildings, equipment and other properties; and
(c) Funds set aside for debt service charges and retirement of indebtedness on institutional plant.

Section 3. A record of each general fund appropriation shall be maintained so as to identify the institutional budgets to which such funds are allotted. Any uncommitted state general funds remaining after the close of business on the last day of the fiscal year shall lapse and be returned to the Treasury of the Commonwealth. Each appropriation shall be used for the intended purpose and where questions of intent arise subject to the provisions of KRS 45.750 and 45.800 in the case

of capital construction projects and major items of equipment as defined by these sections, the decision of the Secretary of the Finance and Administration Cabinet, based upon budget work papers, shall be final.

Section 4. State general funds appropriated by the General Assembly for capital construction projects and equipment purchases as defined in KRS 45.750 through 45.800 shall not lapse at the end of a fiscal year. They shall be carried forward until the project is completed. Any such unexpended funds remaining after acceptance of the project as complete shall be returned to a surplus account of the capital construction fund for investment until appropriated and allotted as provided in KRS 45.750 through 45.800.

Section 5. Long lived assets of the institution, including land, buildings, and capital equipment, shall be accounted for in the plant fund group.

Section 6. The president shall prepare such information as is necessary for the Board of Regents of Kentucky State University to make an annual report of the financial activity to the Council on Higher Education. The report shall meet the requirements of the Council's system of uniform financial reporting for institutions of higher education.

GEORGE W. WILSON, Chairman
APPROVED BY AGENCY: November 15, 1985
FILED WITH LRC: November 15, 1985 at 11 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 23, 1985 at 10 a.m. in the Board Room in the Academic Services Building, Kentucky State University. Those interested in attending this hearing shall contact: Carson E. Smith, Vice-President for Business Affairs, Academic Services Building, Kentucky State University, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Carson E. Smith
(1) Type and number of entities affected: Kentucky State University, Treasury Department, Division of Accountants, State Computer Services
(a) Direct and indirect costs or savings to those affected:
1. First year: Reduction in checks issued, processing and filing documents, microfilming documents, computer time involved in processing transactions, reduction in quantity of computer reports produced. Estimated savings of $80,000.
2. Continuing costs or savings: Same as above with modest increase due to increased volume and cost factors.
3. Additional factors increasing or decreasing costs (note any effects upon competition): None
(b) Reporting and paperwork requirements: None
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: $3,000 savings
2. Continuing costs or savings: $3,000 per year savings plus effect of cost-of-living increases
3. Additional factors increasing or decreasing costs: None
(b) Reporting and paperwork requirements: None
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: Management need for integrated systems including interactive entries between student records, financial aid and student billings, payroll (students) and accounting.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication:
(a) Necessity of proposed regulation if in conflict: None
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments:

Tiering:
Was tiering applied? No. Tiering was not applied because the university is establishing uniform standards.

Cost Estimates

1.a-1 - First Year

| | | |
|---|---|---|
| Payroll | | |
| Students | 600 x 6 x 2.00 | $ (7,200) |
| Fac. & Admin | 200 x 12 x 2.00 | (4,800) |
| Semi-Monthly | 400 x 24 x 2.00 | (19,200) |
| Vendor payments, honorariums, contracts, etc. | | |
| Total number per year (estimated) | 5,000 x $10.00 | (50,000) |
| | | $(81,200) |

2.a-1 - First Year

| | | |
|---|---|---|
| Payroll | | |
| Cost of checks | 15,600 x.25 | $ 3,900 |
| Value of computer time for printing checks - gross to net already being done | 15,600 x .35 | 5,460 |
| Value of clerical time saved sorting and distributing checks, split salary distribution, automatic salary distribution | | (10,000) |
| Bank reconciliation process (computer program) | | 2,000 |
| | | $ 1,360 |
| Vendor payments | | |
| Checks | 5,000 x .25 | $ 1,250 |
| Savings in copying, invoices, typing state payment forms, manual matching of checks to transmittal document and warrant and manually checking KSU accounting system to state reports | | (10,000) |

| | |
|---|---|
| Cost of bank reconciliation process (computer time and accountants time) | 4,000 |
| Vendor Subtotal | $ (4,750) |
| Total | $ (3,390) |

KENTUCKY STATE UNIVERSITY
Board of Regents

**745 KAR 1:020. Annual audit.**

RELATES TO: KRS 164A.570
PURSUANT TO: KRS 164A.560
NECESSITY AND FUNCTION: KRS 164A.560 permits the governing boards of each public institution of higher education to elect to perform financial management functions per KRS 164A.630 by issuing regulations to do so. These regulations implement the provision of KRS 164A.570 at Kentucky State University. The scheduled implementation date of this regulation is July 1, 1986.

Section 1. Upon recommendation of the president, based upon the appropriate procurement procedure, the Board of Regents of Kentucky State University shall engage a qualified firm of Certified Public Accountants experienced in the auditing of institutions to conduct an annual examination of the institution's financial statements in accordance with generally accepted auditing standards for the purpose of submitting an independent opinion, and preparing a report of findings and recommendations concerning internal accounting controls and procedures, and compliance with KRS 164A.555 to 164A.630. The Secretary of the Finance and Administration Cabinet may prescribe the minimum scope of any such audit. The opinion, with the findings and recommendations, shall be forwarded to the Governor, the Secretary of the Finance and Administration Cabinet, the Auditor of Public Accounts, the Director of the Legislative Research Commission, the Executive Director of the Council on Higher Education, and members of the Board of Regents.

GEORGE W. WILSON, Chairman
APPROVED BY AGENCY: November 15, 1985
FILED WITH LRC: November 15, 1985 at 11 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 23, 1985 at 10 a.m. in the Board Room in the Academic Services Building, Kentucky State University. Those interested in attending this hearing shall contact: Carson E. Smith, Vice-President for Business Affairs, Academic Services Building, Kentucky State University, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Carson E. Smith
(1) Type and number of entities affected: Finance and Administration Cabinet, Auditor of Public Accounts
(a) Direct and indirect costs or savings to those affected:
1. First year: None
2. Continuing costs or savings: None
3. Additional factors increasing or decreasing costs (note any effects upon competition): None
(b) Reporting and paperwork requirements: None
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: Possible small increase in cost of audit for compliance testing not to exceed $3,000
2. Continuing costs or savings: Same as above
3. Additional factors increasing or decreasing costs: None
(b) Reporting and paperwork requirements: None
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: Audit required by outstanding bond issues.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication:
(a) Necessity of proposed regulation if in conflict: None
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments:

Tiering:
Was tiering applied? No. Tiering was not applied because the university is establishing uniform standards.

KENTUCKY STATE UNIVERSITY
Board of Regents

**745 KAR 1:030. Purchasing-inventory-sales of surplus property bidding procedures.**

RELATES TO: KRS 164A.575
PURSUANT TO: KRS 164A.560
NECESSITY AND FUNCTION: KRS 164A.560 permits the governing boards of public institutions of higher education to elect to perform financial management functions per KRS 164A.555 to 164A.630 by issuing regulations to do so. These regulations implement the provision of KRS 164A.575 at Kentucky State University. The scheduled implementation date of this regulation is July 1, 1986.

Section 1. The President of Kentucky State University, on behalf of the Board of Regents, is authorized to purchase interest in real property, contractual services, rentals of all types, supplies, materials, equipment, printing, and services, in accordance with procedures based upon the principles of KRS Chapter 45A, except that competitive bids may not be required for:
(1) Contractual services where no competition exists, such as telephone service, electrical energy, and other public utility services;
(2) Food, clothing, equipment, supplies, or other materials to be used in laboratory and experimental studies;
(3) Instructional materials available from one (1) source;
(4) Where rates are fixed by law or ordinance;
(5) Library books;
(6) Commercial items that are purchased for resale;
(7) Professional, technical, scientific or artistic services, but contracts shall be submitted in accordance with KRS 45.700 and

45.720;
(8) All other commodities, equipment and services which, in the reasonable discretion of the board, are available from only one (1) source; and
(9) Interests in real property.

Section 2. The President of Kentucky State University, on behalf of the Board of Regents, is authorized to negotiate with vendors who maintain a general service administration price agreement with the United States of America or any agency thereof, provided, however, that no contract executed under this provision shall authorize a price higher than is contained in the contract between General Service Administration and the vendor affected.

Section 3. The President of Kentucky State University shall direct the appropriate institutional officers to take and maintain inventories of plant and equipment.

Section 4. The President of Kentucky State University shall establish procedures to identify items of common general usage among all departments to foster volume purchasing, and shall establish and enforce schedules for purchasing supplies, materials and equipment.

Section 5. The President of Kentucky State University shall have power, on behalf of the Board of Regents, to salvage, to exchange, and to condemn supplies, equipment, and real property.

Section 6. Upon the approval of the Secretary of the Finance and Administration Cabinet and the Board of Regents, the president may purchase or otherwise acquire, on behalf of the Board of Regents, all real property determined to be needed for the institution's use. The amount paid shall not exceed the appraised value as determined by a qualified appraiser or the value set by the eminent domain procedure.

Section 7. The Board of Regents of Kentucky State University, acting through the president, shall sell or otherwise dispose of all real or personal property of the institution which is not needed or has become unsuitable for public use, or would be more suitable consistent with the public interest for some other use, as determined by the board. The determination of the board shall be set forth in an order, and shall be reached only after review of a written request by the institution desiring to dispose of the property. Such request shall describe the property and state the reasons why the institution believes disposal should be effected. All instruments required by law to be recorded which convey any interest in any such real property so disposed of shall be executed and signed by the appropriate officer of the board. Unless the board deems it in the best interest of the university to proceed otherwise, all such real or personal property shall be sold either by initiation of sealed bids or by public auction, provided, however, that the selling price of any interest in real property shall not be less than the appraised value thereof as determined by the Finance and Administration Cabinet or the Department of Transportation for such requirements of that department.

Section 8. Real property or any interest therein may, subject to the provisions of KRS Chapter 45A, be purchased, leased, or otherwise acquired from any officer or employee of any board of the university, based upon a written application by the grantor or lessor approved by the board, that the employee has not either himself or through any other person influenced or attempted to influence the board requesting the purchase of the property. In any case in which such an acquisition is consummated, the said request and finding shall be recorded and kept by the Secretary of State along with the other documents recorded pursuant to the provisions of KRS Chapter 56.

Section 9. The Board of Regents shall attempt in every practicable way to insure the university's supplying its real needs at the lowest possible cost. To accomplish this, the board authorizes the president, on its behalf, to enter into cooperative agreements with other public or private institutions of education or health care.

Section 10. The president, on behalf of the Board of Regents, shall have control and supervision over all purchases of energy consuming equipment, supplies and related equipment purchased or acquired by the university. All energy consuming items will be purchased so as to promote energy conservation and acquisition of energy efficient products. This is to be accomplished by having the Director of Physical Plant review all such purchases in terms of energy conservation plans of the university and advise the president or his purchasing delegate accordingly.

Section 11. The president is authorized on behalf of the Board of Regents to negotiate directly for the purchase of contractual services, supplies, materials, or equipment in bona fide emergencies regardless of estimated costs. The existence of the emergency must be fully explained, in writing, by the Vice President for Business Affairs and such explanation must be approved by the university president. The letter and approval shall be filed with the record of all such purchases. Where practical, standard specifications shall be followed in making emergency purchases. A good faith effort shall be made to effect a competitively established price for emergency purchase.

GEORGE W. WILSON, Chairman
APPROVED BY AGENCY: November 15, 1985
FILED WITH LRC: November 15, 1985 at 11 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 23, 1985 at 10 a.m. in the Board Room in the Academic Services Building, Kentucky State University. Those interested in attending this hearing shall contact: Carson E. Smith, Vice President for Business Affairs, Academic Services Building, Kentucky State University, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Carson E. Smith
(1) Type and number of entities affected: State purchasing office.
(a) Direct and indirect costs or savings to

those affected:
1. First year: $20,000
2. Continuing costs or savings: $20,000
3. Additional factors increasing or decreasing costs (note any effects upon competition): None
(b) Reporting and paperwork requirements: None
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: $55,000
2. Continuing costs or savings: $5,000
3. Additional factors increasing or decreasing costs: None
(b) Reporting and paperwork requirements: None
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: None
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication:
(a) Necessity of proposed regulation if in conflict: None
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments:

Tiering:
Was tiering applied? No. Tiering was not applied because the university is establishing uniform standards.

## KENTUCKY STATE UNIVERSITY
## Board of Regents

**745 KAR 1:040. Disposal of property-proceeds; title.**

RELATES TO: KRS 164.410
PURSUANT TO: KRS 164A.560
NECESSITY AND FUNCTION: KRS 164A.560 permits the governing board of public institutions of higher education to elect to perform financial management functions per KRS 164A.555 to 164A.630 by issuing regulations to do so. These regulations implement the provisions of KRS 164.410 at Kentucky State University. The scheduled implementation date of this regulation is July 1, 1986.

Section 1. The Board of Regents of Kentucky State University shall periodically review the assets of the university and shall sell and convey those assets not necessary for implementing the institutional mission. Proceeds from the disposition shall be deposited in the unexpended plant fund account or in the fund for excellence authorized by KRS 164A.620.

Section 2. Any real property acquired by the Board of Regents at Kentucky State University pursuant to KRS 164.410 shall be in the name of the Commonwealth of Kentucky for the use and benefit of Kentucky State University.

GEORGE W. WILSON, Chairman
APPROVED BY AGENCY: November 15, 1985
FILED WITH LRC: November 15, 1985 at 11 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 23, 1985 at 10 a.m. in the Board Room in the Academic Services Building, Kentucky State University. Those interested in attending this hearing shall contact: Carson E. Smith, Vice President for Business Affairs, Academic Services Building, Kentucky State University, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Carson E. Smith
(1) Type and number of entities affected: Surplus Property
(a) Direct and indirect costs or savings to those affected:
1. First year: None
2. Continuing costs or savings: None
3. Additional factors increasing or decreasing costs (note any effects upon competition): None
(b) Reporting and paperwork requirements:
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: None
2. Continuing costs or savings: None
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements: None
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: None
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication:
(a) Necessity of proposed regulation if in conflict: None
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments:

Tiering:
Was tiering applied? No. Tiering was not applied because the university is establishing uniform standards.

## KENTUCKY STATE UNIVERSITY
## Board of Regents

**745 KAR 1:050. Issuance of bonds.**

RELATES TO: KRS 164A.605
PURSUANT TO: KRS 164A.560
NECESSITY AND FUNCTION: KRS 164A.560 permits the governing boards of public institutions of higher education to elect to perform financial management functions per KRS 164A.555 to 164A.630 by issuing regulations to do so. These regulations implement the provision of KRS 164A.605 at Kentucky State University. The scheduled implementation date of this regulation is July 1, 1986.

Section 1. Subject to the provisions of KRS 45.750 to 45.800 and KRS 56.870 to 56.874, the Board of Regents of Kentucky State University may issue, under the provisions of KRS 162.340 to 162.380, consolidated educational building revenue bonds, housing bonds, or bond anticipation notes. The president, on behalf of the Board of Regents of Kentucky State University, shall submit to the State Property and Buildings Commission a request for approval of the project before any financial commitment of any sort may be made in connection therewith, including employment of architects, engineers,

fiscal agents or attorneys. Personal service contracts for fiscal agents and bond counsel shall be subject to KRS 45.700 to 45.720. After approval by the commission, the Board of Regents of Kentucky State University, upon recommendation of the president, shall appoint fiscal agents and bond counsel as may be required to make financial arrangements for the project. The date of sale on such issues shall be coordinated with the Finance and Administration Cabinet to avoid a conflict with other state bond issues.

GEORGE W. WILSON, Chairman
APPROVED BY AGENCY: November 15, 1985
FILED WITH LRC: November 15, 1985 at 11 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 23, 1985 at 10 a.m. in the Board Room in the Academic Services Building, Kentucky State University. Those interested in attending this hearing shall contact: Carson E. Smith, Vice President for Business Affairs, Academic Services Building, Kentucky State University, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Carson E. Smith
(1) Type and number of entities affected: State Property and Building Commission, Finance and Administration Cabinet
(a) Direct and indirect costs or savings to those affected:
1. First year: None
2. Continuing costs or savings: None
3. Additional factors increasing or decreasing costs (note any effects upon competition): None
(b) Reporting and paperwork requirements: None
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: None
2. Continuing costs or savings: None
3. Additional factors increasing or decreasing costs: None
(b) Reporting and paperwork requirements: Approval of State Property and Building Commission and Board of Regents.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: None
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication:
(a) Necessity of proposed regulation if in conflict: None
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: No plans to issue new bonds in the immediate future.

Tiering:
Was tiering applied? No. Tiering was not applied because the university is establishing uniform standards.

## KENTUCKY STATE UNIVERSITY
### Board of Regents

**745 KAR 1:060. Delegation of financial management responsibility.**

RELATES TO: KRS 164A.555 to 164A.605
PURSUANT TO: KRS 164A.560
NECESSITY AND FUNCTION: KRS 164A.560 permits the governing boards of public institutions of higher education to elect to perform financial management functions per KRS 164A.555 to 164A.630 by issuing regulations to do so. These regulations implement the provision of KRS 164A.605 at Kentucky State University. The scheduled implementation date of this regulation is July 1, 1986.

Section 1. The Board of Regents of Kentucky State University authorizes the president, by formal, written assignment, to delegate any portion of this authority to the Vice President for Business Affairs, except as provided in Section 4 of this regulation.

Section 2. Kentucky State University officials to whom the president has delegated certain financial management responsibilities pursuant to this regulation, are authorized to subdelegate those responsibilities or any portion thereof to their deputies and subordinates to the extent authorized by the president. All such subdelegations shall be made in writing and reported to the president.

Section 3. Any Kentucky State University official with authority derived from a delegation or subdelegation under this regulation shall furnish a copy of his delegation or subdelegation upon request of any vendor or member of the public. All such delegations or subdelegations are terminated immediately upon suspension of the individual's employment at the university.

Section 4. No official, including the president, is authorized by Kentucky State University Board of Regents to acquire or dispose of an interest in real property, the duration of which interest exceeds two (2) years time, without action of the Board of Regents.

GEORGE W. WILSON, Chairman
APPROVED BY AGENCY: November 15, 1985
FILED WITH LRC: November 15, 1985 at 11 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 23, 1985 at 10 a.m. in the Board Room in the Academic Services Building, Kentucky State University. Those interested in attending this hearing shall contact: Carson E. Smith, Vice President for Business Affairs, Academic Services Building, Kentucky State University, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Carson E. Smith
(1) Type and number of entities affected: None
(a) Direct and indirect costs or savings to those affected:
1. First year: None
2. Continuing costs or savings: None
3. Additional factors increasing or decreasing costs (note any effects upon competition): None

(b) Reporting and paperwork requirements: None
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: None
2. Continuing costs or savings: None
3. Additional factors increasing or decreasing costs: None
(b) Reporting and paperwork requirements: Official delegation of authority.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: None
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication:
(a) Necessity of proposed regulation if in conflict: None
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments:

Tiering:
Was tiering applied? No. Tiering was not applied because the university is establishing uniform standards.

**PUBLIC PROTECTION AND REGULATION CABINET**
**Department of Alcoholic Beverage Control**

**804 KAR 4:280. Affiliated businesses.**

RELATES TO: KRS 244.240, 244.570
PURSUANT TO: KRS 241.060
NECESSITY AND FUNCTION: KRS 244.240 prohibits a distiller, rectifier, vintner or wholesaler or an employee thereof from being interested "directly or indirectly" in any way in any premises where distilled spirits or wine are sold at retail or any business devoted wholly or partially to the sale of distilled spirits or wine at retail. KRS 244.570 prohibits a brewer or distributor "either directly or indirectly" from having an ownership or leasehold interest in any property for which a retail license is issued. The trend in the alcoholic beverage industry today, as well as in American business generally, is toward diversification. It is a common practice for manufacturers, wholesalers and distributors, to be owned by holding companies which may also own many other businesses unrelated to the manufacture or distribution of alcoholic beverages. Because of the rise of this diversification, it has become more difficult to determine whether an "indirect" interest in a retail premises exists. This regulation will eliminate any confusion relating to the application of KRS 244.240 and/or KRS 244.570 to businesses affiliated with distillers, rectifiers, vintners, wholesalers, brewers and distributors.

Section 1. For the purpose of this regulation an affiliated business of a distiller, rectifier, vintner, wholesaler, brewer or distributor is a corporate entity owned in whole or in part, directly or indirectly, by a corporation which itself also owns in whole or in part a corporation engaged in the business of distiller, rectifier, vintner, wholesaler, brewer or distributor.

Section 2. For the purposes of KRS 244.240 and KRS 244.570 the term "indirectly" shall not preclude an affiliated business of a distiller, rectifier, vintner, wholesaler, brewer or distributor from having an ownership or leasehold interest in a property for which a retail alcoholic beverage license is issued, provided all the following conditions are met:
(1) The affiliated business is not a wholly owned subsidiary of a distiller, rectifier, vintner, wholesaler, brewer or distributor.
(2) The affiliated business does not wholly own a business entity engaged in the business of distiller, rectifier, vintner, wholesaler, brewer or distributor.
(3) The affiliated business is not engaged in any manner in the business of distiller, rectifier, vintner, wholesaler, brewer or distributor.
(4) The affiliated business does not itself hold any retail licenses.
(5) The affiliated business and the distiller, rectifier, vintner, wholesaler, brewer or distributor shall have separate management and in no case shall the affiliated business and the distiller, rectifier, vintner, wholesaler, brewer or distributor have more than twenty-five (25) percent of their officers or directors in common.

Section 3. The provisions of this regulation in no manner relieve any distiller, rectifier, vintner, wholesaler, brewer or distributor from the provisions of KRS 244.240, 244.590 and 244.600.

EDWARD A. FARRIS, Commissioner
MELVIN WILSON, Secretary
APPROVED BY AGENCY: November 12, 1985
FILED WITH LRC: November 12, 1985 at 1 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on the above proposed regulation will be held on Monday, December 23, 1985, at 10 a.m., EST, in the hearing room of the Department of Alcoholic Beverage Control, 123 Walnut, Frankfort, Kentucky. Unless requests for a public hearing are received, in writing, five (5) working days before the hearing date, the public hearing will be cancelled. Those who may be interested in attending, please contact: Joyce A. Hall, Secretary to the Board, Alcoholic Beverage Control Board, 123 Walnut, Frankfort, Kentucky 40601.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Edward A. Farris
(1) Type and number of entities affected: N/A
(a) Direct and indirect costs or savings to those affected:
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements:
(2) Effects on the promulgating administrative body: N/A
(a) Direct and indirect costs or savings:
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements:
(3) Assessment of anticipated effect on state and local revenues: N/A

(4) Assessment of alternative methods; reasons why alternatives were rejected: N/A
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: N/A
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments: N/A

Tiering:
Was tiering applied? No. N/A

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**
**Radiation and Product Safety Branch**

**902 KAR 47:050. Ban of paint, coatings, and certain consumer products containing lead.**

RELATES TO: KRS 211.901 to 211.905, 211.994, 217.801, 217.990(7)
PURSUANT TO: KRS 194.050, 211.090, 211.180, 211.901
NECESSITY AND FUNCTION: KRS 211.090 and 211.180 authorize the Cabinet for Human Resources to adopt regulations for the prevention and control of health hazards. In addition, KRS 211.901 authorizes the cabinet to adopt regulations for the prevention of lead poisoning. The function of this regulation is to ban lead-containing paint and similar surface coatings and toys, certain furniture and other consumer products on which lead-containing paint and coatings are used.

Section 1. Scope and Application. (1) The manufacture or distribution of lead-containing paint and similar surface coatings for general consumer use; toys and other articles intended for use by children that bear lead-containing paint or similar surface coatings; and furniture articles for consumer use that bear lead-containing paint or similar surface coatings are hereby banned within the Commonwealth of Kentucky.
(2) The ban applies to the products in the categories described in subsection (1) of this section which are "consumer products" as defined in Section 2(2) of this regulation which includes those articles produced for use by the consumer in or around the home, in the school, in recreation or otherwise covered by this regulation. Paints for motor vehicles and boats are not included since they are not within the definition of "consumer product." The ban, in addition to applying to products sold directly to consumers, does apply to products which, after sale, are used or enjoyed by consumers, such as paints and similar surface coatings used on residences, schools, hospitals, parks, playgrounds, public buildings, and other areas where consumers will have direct access to the painted or coated surface.
(3) The ban is considered necessary since it has been determined by the scientific community that there is an unreasonable risk of lead poisoning in children associated with and having access to paints and similar surface coatings containing lead in excess of 0.06 percent by weight of the total non-volatile content or weight of the dried paint or coating film.

Section 2. Definitions. (1) "Cabinet" means the Cabinet for Human Resources.
(2) "Consumer product" means any article, or component part thereof, produced or distributed for sale to a consumer for use in or around a permanent or temporary household or residence, a school, in recreation, or otherwise, or for the personal use, consumption or enjoyment of the consumer in or around a permanent or temporary household or residence, a school, in recreation, or otherwise, but such term does not include:
(a) Articles not customarily produced or distributed for sale to, or use or consumption by, or enjoyment of the consumer;
(b) Tobacco or tobacco products;
(c) Motor vehicle, or motor vehicle equipment;
(d) Economic poisons;
(e) Aircraft or related equipment or appliances;
(f) Boats, vessels, or appurtenances to such;
(g) Drugs, devices, or cosmetics; and
(h) Foods or feed.
(3) "Paint and other similar surface coatings" means a fluid, semi-fluid, or other material, with or without a suspension of finely divided coloring matter, which changes to a solid film when a thin layer is applied to a metal, wood, stone, paper, leather, cloth, plastic, or other surface. This term does not include printing inks or those materials which actually become a part of the substrate, such as the pigment in a plastic article, or those materials which are actually bonded to the substrate, such as by electoplating or ceramic glazing.
(4) "Lead-containing paint" means paint or other similar surface coatings containing lead or lead compounds and in which the lead content (calculated as lead metal) is in excess of 0.06 percent by weight of the total non-volatile content of the paint or the weight of the dried paint or coating film.
(5) "Toys and other articles intended for use by children" means those toys and other articles which are intended to be entrusted to or for use by children. This does not include all articles to which children might have access simply because they are present in a household.
(6) "Furniture article" means those movable articles: used to support people or things; other functional or decorative furniture articles, including, but not limited to, products such as beds, bookcases, chairs, chests, tables, dressers, desks, pianos, console, televisions, and sofas. The term "furniture article" does not include appliances, such an ranges, refrigerators, dishwashers, clothes washers and dryers, air conditioners, humidifiers, and dehumidifiers, fixtures such as bathroom fixtures, built-in cabinets, chandeliers, windows, and doors; or household items such as window shades, venetian blinds, or wall hangings and draperies.

Section 3. Exemptions. (1) The following categories of products are exempt from the scope of the ban established by this requirements of subsection (2) or (3) of this section:
(a) Agricultural and industrial equipment refinish coatings;
(b) Industrial (and commercial) building nd equipment, maintenance, coatings, including traffic and safety marking coatings;
(c) Graphic art coatings (i.e., products marketed solely for application on billboards,

road signs, and similar uses and for identification marking in industrial buildings);

(d) Touchup coatings for agricultural equipment, lawn and garden equipment, and appliances;

(e) Catalyzed coatings marketed solely for use on radio-controlled model powered aircraft.

(2) The products listed in subsection (1) of this section are exempted provided:

(a) That these products bear on the main panel of their label, in addition to any labeling that may be otherwise required, the signal word "Warning" (unless some other signal word is required) and the following statement: "Contains Lead. Dried Film of This Paint May Be Harmful If Eaten or Chewed."

(b) That these products also bear on the main or secondary panel of the label the following additional statement or its practical equivalent: "Do not apply on toys and other children's articles, furniture, or interior surfaces of any dwelling or facility which may be occupied or used by children." "Do not apply on exterior surfaces of dwelling units, such as window sills, porches, stairs, or railings, to which children may be commonly exposed." "Keep out of reach of children." If the statement required by the preceding subsection is placed on a label panel other than the main panel, the label statement required to be on the main panel shall contain the following additional statement: "See other cautions on _____ (insert 'side' or 'back,' as appropriate) panel."

(c) The placement, conspicuousness, contrast, and type size of the label statements required by this section shall comply with the requirements of the Kentucky Hazardous Substances Labeling Act, KRS 217.650 to 217.710 and 217.993, the U.S. Consumer Product Safety Act (Public Law 92-573; 15 U.S.C. 2051, et seq.) as amended, and regulations adopted pursuant thereto.

(3) The following products are exempt from the scope of the ban established by this section and no cautionary labeling is required:

(a) Mirrors which are part of furniture articles to the extent that they bear lead-containing backing paints;

(b) Artists' paints and related materials;

(c) Metal furniture articles (but not metal children's furniture) bearing factory-applied (lead) coatings.

Section 4. Test Procedures. The test procedures prescribed in the standards established by the Association of Official Analytical Chemist, 14th Edition, shall be applicable to regulations adopted by the cabinet relating to paint and similar surface coatings. A copy of such publication shall be on file in the office of the Commissioner of Health Services and shall be open for public inspection. A copy of such publication may be obtained by writing to the Association of Official Analytical Chemist, Inc., 1111 N. 19th Street, Suite 210, Arlington, VA 22209.

Section 5. Compliance. Paint and other similar surface coatings which are in compliance with applicable standards adopted by the United States Consumer Product Safety Commission, shall be considered to be in compliance with this regulation. In the event of a variance between this regulation and the regulations adopted by the United States Consumer Product Safety Commission relating to paint and other similar surface coating materials, compliance with the federal regulations shall be deemed compliance with the provisions of this regulation.

Section 6. Issuance and Service of Notice of Violation. (1) When test procedures prescribed in Section 4 of this regulation reveal that paint or other similar surface coatings are not in compliance with the standards set forth therein, the cabinet shall notify the owner of such violations by means of a written notice. Such notification shall:

(a) Set forth the specific violations found;

(b) Establish a specific and reasonable period of time for the correction of such violations; and

(c) State that an opportunity for appeal from any notice of findings will be provided if a written request for a hearing is filed with the cabinet within fifteen (15) days of receipt of the notice of findings.

(2) Notices provided for under this regulation shall be deemed to have been properly served when the written notification of findings has been delivered to the owner of the paint or coatings manufacturing firm or person in charge, or when such notice has been sent by registered or certified mail, return receipt requested, to the last known address of the owner or person in charge. A copy of such notice shall be filed in the records of the cabinet.

Section 7. Hearings. Upon timely receipt of a written request for an appeal of the findings of any inspection under the authority of this regulation, the cabinet shall afford an aggrieved party the opportunity for a hearing. A hearing pursuant to this regulation shall be conducted at a time and place designated by the cabinet. The cabinet shall make written findings of fact and conclusions of law.

Section 8. Quarantine and Recall. In the event paint or similar surface coatings, toys and other articles intended for use by children or furniture for consumer use do not meet the applicable standards set forth in this regulation as to lead content and appropriate labeling after the effective date of this regulation, the cabinet may quarantine or require the recall of such article(s) pursuant to KRS 217.700. If a product applicable to this regulation fails to meet the lead and labeling requirements as set forth, the manufacturer or distributor of such product may be requested by the cabinet to initiate a voluntary recall of the product from those wholesale and retail establishments to which the product was distributed. The responsible manufacturer or distributor will provide the cabinet with a copy of the recall with a listing of all establishments contacted, the amount of product returned to the recalling establishment, and the disposition of the product in violation.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary

APPROVED BY AGENCY: October 22, 1985

FILED WITH LRC: November 12, 1985 at 9 a.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will

be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected: Paint manufacturers, furniture and toy manufacturers located in Commonwealth or distributed into the Commonwealth.
(a) Direct and indirect costs or savings to those affected: None
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body: None
(a) Direct and indirect costs or savings: None
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method known.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None on state level - compliments but no effect on U.S. Consumer Product Safety regulation.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

**CABINET FOR HUMAN RESOURCES**
**Department for Health Services**

**902 KAR 100:021. Disposal of radioactive material.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844, 211.846, 211.852
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. The purpose of this regulation is to provide waste disposal limitations for radioactive material.

Section 1. Applicability. This regulation applies to all persons disposing of radioactive material licensed pursuant to the cabinet's radiation regulations.

Section 2. General Requirement. No licensee shall dispose of any radioactive material except:
(1) By transfer to an authorized recipient as provided in 902 KAR 100:040, Section 13; or
(2) Pursuant to 902 KAR 100:020, Section 8; 902 KAR 100:022; or this regulation.

Section 3. Method of Obtaining Approval of Proposed Disposal Procedures. (1) Any person may apply to the cabinet for approval of proposed procedures to dispose of radioactive material in a manner not otherwise authorized in these regulations. Each application shall include a description of the radioactive material, including the quantities and kinds of radioactive material and levels of radioactivity involved, and the proposed manner and conditions of disposal. The application, where appropriate, should also include an analysis and evaluation of pertinent information as to the nature of the environment, including topographical, geological, meteorological, and hydrological characteristics; usage of ground and surface waters in the general area; the nature and location of other potentially affected facilities; and procedures to be observed to minimize the risk of unexpected or hazardous exposures.
(2) The cabinet shall not approve any application for a license to receive radioactive material from other persons for disposal on land not owned by the Commonwealth of Kentucky or the federal government.

Section 4. Disposal by Release into Sanitary Sewerage Systems. (1) No licensee shall discharge radioactive material into a sanitary sewerage system unless:
(a) It is readily soluble or dispersible in water;
(b) The quantity of any radioactive material released into the system by the licensee in any one (1) day does not exceed the larger of:
1. The quantity which, if diluted by the average daily quantity of sewage released into the sewer by the licensee, will result in an average concentration equal to the limits specified in 902 KAR 100:025, Table I, Column 2; or
2. Ten (10) times the quantity of such material specified in 902 KAR 100:030;
(c) The quantity of any radioactive material released in any one (1) month, if diluted by the average monthly quantity of water released by the licensee, will not result in an average concentration exceeding the limits specified in 902 KAR 100:025, Table I, Column 2; and
(d) The gross quantity of radioactive material, excluding hydrogen-3 and carbon-14, released into the sewerage system by the licensee does not exceed one (1) curie per year. The quantities of hydrogen-3 and carbon-14 released into the sanitary sewerage system may not exceed five (5) curies per year for hydrogen-3 and one (1) curie per year for carbon-14.
(2) No licensee shall discharge radioactive material into an individual sewerage disposal system used for the treatment of waste water serving only a single dwelling, office building, industrial plant, or institution except as specifically approved by the cabinet pursuant to Section 3 of this regulation and 902 KAR 100:020, Section 8.
(3) Excreta from individuals undergoing

medical diagnosis or therapy with radioactive material shall be exempt from any limitations contained in this section.

Section 5. Disposal by Incineration. No licensee shall incinerate radioactive material for the purpose of disposal or preparation for disposal except as specifically approved by the cabinet pursuant to Section 3 of this regulation and 902 KAR 100:020, Section 8.

Section 6. Disposal of Specific De Minimus Waste. (1) Any licensee may dispose of the following radioactive material without regard to its radioactivity:

(a) 0.05 microcurie or less of hydrogen-3, carbon-14, or iodine-125 per gram of medium used for liquid scintillation counting; and

(b) 0.05 microcurie or less of hydrogen-3, carbon-14, or iodine-125 per gram of animal tissue averaged over the weight of the entire animal; provided, however, tissue may not be disposed of under this subsection in a manner that would permit its use either as food for humans or as animal feed.

(2) Nothing in this section relieves the licensee from complying with other applicable federal, state, and local regulations governing any other toxic or hazardous property of these materials.

(3) Nothing in this section relieves the licensee from complying with other applicable federal, state, and local regulations governing any other toxic or hazardous property of these materials.

Section 7. Classification of Radioactive Waste for Near-Surface Disposal. (1) Considerations. Determination of the classification of waste involves two (2) considerations:

(a) Consideration must be given to the concentration of long-lived radionuclides, and their shorter-lived precursors, whose potential hazard will persist long after such precautions as institutional controls, improved waste form, and deeper disposal have ceased to be effective. These precautions delay the time when long-lived radionuclides could cause exposures. In addition, the magnitude of the potential dose is limited by the concentration and availability of the radionuclide at the time of exposure; and

(b) Consideration must be given to the concentration of shorter-lived radionuclides for which requirements on institutional controls, waste form, and disposal methods are effective.

(2) Classes of waste.

(a) Class A waste is waste that is usually segregated from other waste classes at the disposal site. The physical form and characteristics of Class A waste must meet the minimum requirements set forth in Section 8 of this regulation. If Class A waste also meets the stability requirements set forth in Section 8(2) of this regulation, it is not necessary to segregate the waste for disposal.

(b) Class B waste is waste that must meet more rigorous requirements on waste form to ensure stability after disposal. The physical form and characteristics of Class B waste must meet both the minimum and stability requirements set forth in Section 8 of this regulation.

(c) Class C waste is waste that not only must meet more rigorous requirements on waste form to ensure stability but also requires additional measures at the disposal facility to protect against inadvertent intrusion. The physical form and characteristics of Class C waste must meet both the minimum and stability requirements set forth in Section 8 of this regulation.

(3) Classification determined by long-lived radionuclides. If the waste contains only radionuclides listed in Table 1 of this section, classification shall be determined as follows:

(a) If the concentration does not exceed one-tenth (0.1) times the value in Table 1, the waste is Class A.

(b) If the concentration exceeds one-tenth (0.1) times the value but does not exceed the value in Table 1, the waste is Class C.

(c) If the concentration exceeds the value in Table 1, the waste is not generally acceptable for near-surface disposal.

(d) For waste containing mixtures of radionuclides listed in Table 1, the total concentration shall be determined by the sum of fractions rule described in subsection (7) of this section.

TABLE 1

| Radionuclide | Concentration curies/cubic meter |
|---|---|
| C-14 | 8 |
| C-14 in activated metal | 80 |
| Ni-59 in activated metal | 220 |
| Nb-94 in activated metal | 0.2 |
| Tc-99 | 3 |
| I-129 | 0.08 |
| Alpha emitting transuranic radionuclides with half-life greater than five (5) years | 100* |
| Pu-241 | 3500* |
| Cm-242 | 20000* |
| Ra-226 | 100* |

*Units are nanocuries per gram.

(4) Classification determined by short-lived radionuclides. If the waste does not contain any of the radionuclides listed in Table 1 of this section, classification shall be determined based on the concentrations shown in Table 2 of this section. If a nuclide is not listed in Table 2, it does not need to be considered in determining the waste class.

(a) If the concentration does not exceed the value in Column 1, the waste is Class A.

(b) If the concentration exceeds the value in Column 1, but does not exceed the value in Column 2, the waste is Class B.

(c) If the concentration exceeds the value in Column 2, but does not exceed the value in Column 3, the waste is Class C.

(d) If the concentration exceeds the value in Column 3, the waste is not generally acceptable for near-surface disposal.

(e) For waste containing mixtures of the radionuclides listed in Table 2, the total concentration shall be determined by the sum of fractions rule described in subsection (7) of this section.

TABLE 2

| Radionuclide | Concentration, curies/cubic meter Column 1 | Column 2 | Column 3 |
|---|---|---|---|
| Total of all radionuclides with less than five (5) year half-life | 700 | * | * |
| H-3 | 40 | * | * |
| Co-60 | 700 | * | * |
| Ni-63 | 3.5 | 70 | 700 |
| Ni-63 in activated metal | 35 | 700 | 7000 |
| Sr-90 | 0.04 | 150 | 7000 |
| Cs-137 | 1 | 44 | 4600 |

* There are not limits established for these radionuclides in Class B or C waste. Practical considerations such as the effects of external radiation and internal heat generation on transportation, handling, and disposal will limit the concentrations for these wastes. This waste shall be Class B unless the concentrations of other radionuclides in Table 2 determine the waste to be Class C independent of these radionuclides.

(5) Classification determined by both long- and short-lived radionuclides. If the waste contains a mixture of radionuclides, some of which are listed in Table 1 of this section, and some of which are listed in Table 2 of this section, classification shall be determined as follows:

(a) If the concentration of a radionuclide listed in Table 1 does not exceed one-tenth (0.1) times the value listed in Table 1, the class shall be that determined by the concentration of radionuclides listed in Table 2.

(b) If the concentration of a radionuclide listed in Table 1 exceeds one-tenth (0.1) times the value but does not exceed the value listed in Table 1, the waste shall be Class C, provided the concentration of radionuclides listed in Table 2 does not exceed the value shown in Column 3 of Table 2.

(6) Classification of waste with radionuclides other than those listed in Tables 1 and 2. If the waste does not contain any radionuclides listed in either Table 1 or 2 of this section, it is Class A.

(7) The sum of fractions rule for mixtures of radionuclides. For determining classification for waste that contains a mixture of radionuclides, it is necessary to determine the sum of fractions by dividing each radionuclide's concentration by the appropriate limit and adding the resulting values. The appropriate limits must all be taken from the same column of the same table. The sum of the fractions for the column must be less than one-tenth (1.0) if the waste class is to be determined by that column. Example: A waste contains Sr-90 in a concentration of 50 Ci/cubic meter and Cs-137 in a concentration of 22 Ci/cubic meter. Since the concentrations both exceed the values in Column 1, Table 2, they must be compared to Column 2 values. For Sr-90 fraction, 50/150 = 0.33; for Cs-137 fraction, 22/44 = 0.5; the sum of the fractions = 0.83. Since the sum is less than 1.0, the waste is Class B.

(8) Determination of concentrations in waste. The concentration of a radionuclide may be determined by indirect methods such as use of scaling factors which relate the inferred concentration of one (1) radionuclide to another that is measured, or radionuclide material accountability, if there is reasonable assurance that the indirect methods can be correlated with actual measurements. The concentration of a radionuclide may be averaged over the volume of the waste, or weight of the waste if the units are expressed as nanocuries per gram.

Section 8. Radioactive Waste Characteristics. (1) The following are minimum requirements for all classes of waste and are intended to facilitate handling and provide protection of health and safety of personnel at the disposal site.

(a) Waste shall be packaged in conformance with the conditions of the license issued to the site operator to which the waste will be shipped. Where the conditions of the site license are more restricted than the provisions of these regulations, the site license conditions shall govern.

(b) Waste shall not be packaged for disposal in cardboard or fiberboard boxes.

(c) Liquid waste shall be solidified or packaged in sufficient absorbent material to absorb twice the volume of the liquid.

(d) Solid waste containing liquid shall contain as little free-standing and non-corrosive liquid as is reasonably achievable, but in no case shall the liquid exceed one (1) percent of the volume.

(e) Waste shall not be readily capable of detonation or of explosive decomposition or reaction at normal pressures and temperatures, or of explosive reaction with water.

(f) Waste shall not contain, or be capable of generating, quantities of toxic gases, vapors, or fumes harmful to persons transporting, handling, or disposing of the waste. This does not apply to radioactive gaseous waste packaged in accordance with paragraph (h) of this subsection.

(g) Waste shall not be pyrophoric. Pyrophoric materials contained in waste shall be treated, prepared, and packaged to be nonflammable.

(h) Waste in a gaseous form shall be packaged at a pressure that does not exceed one and five-tenths (1.5 ) atmospheres at twenty degrees Centigrade (20°C). Total activity shall not exceed 100 curies per container.

(i) Waste containing hazardous, biological, pathogenic, or infectious material shall be treated to reduce to the maximum extent practicable the potential hazard from the non-radiological materials.

(2) The following requirements are intended to provide stability of the waste. Stability is intended to ensure that the waste does not structurally degrade and affect overall stability of the site through slumping, collapse, or other failure of the disposal unit and thereby lead to water infiltration. Stability is also a factor in limiting exposure to an inadvertent intruder, since it provides a recognizable and non-dispersible waste.

(a) Waste shall have structural stability. A structurally stable waste form will generally maintain its physical dimensions and its form, under the expected disposal conditions such as weight of overburden and compaction equipment, the presence of moisture, and microbial activity, and internal factors such as radiation

effects and chemical changes. Structural stability can be provided by the waste form itself, processing the waste to a stable form, or by placing the waste in a disposal container or structure that provides stability after disposal.

(b) Notwithstanding the provisions in subsection (1)(c) and (d) of this section, liquid waste, or waste containing liquid, shall be converted into a form that contains as little free standing and non-corrosive liquid as is reasonably achievable, but in no case shall the liquid exceed one (1) percent of the volume of the waste when the waste is in a disposal container designed to ensure stability, or five-tenths (0.5) percent of the volume of the waste for waste processed to a stable form.

(c) Void spaces within the waste and between the waste and its package shall be reduced to the extent practicable.

Section 9. Labeling. Each package of waste shall be clearly labeled to identify whether it is Class A, Class B, or Class C waste, in accordance with Section 7 of this regulation.

Section 10. Transfer for Disposal and Manifests. (1) Each shipment of waste to a licensed land disposal facility shall be accompanied by a shipment manifest that contains the name, address, and telephone number of the person generating the waste. The manifest shall also include the name, address, and telephone number or the name and U.S. Environmental Protection Agency hazardous identification number of the person transporting the waste to the land disposal facility. The manifest shall also indicate as completely as practicable: a physical description of the waste; the waste volume; radionuclide identity and quantity; the total radioactivity; and the principal chemical form. The solidification agent shall be specified. Waste containing more than one-tenth (0.1) percent chelating agents by weight shall be identified and the weight percentage of the chelating agent estimated. Waste classified as Class A, Class B, or Class C in Section 7 of this regulation shall be clearly identified as such in the manifest. The total quantity of the radionuclides H-3, C-14, Tc-99 and I-129 shall be shown.

(2) The manifest required in subsection (1) of this section may be shipping papers used to meet U.S. Department of Transportation or U.S. Environmental Protection Agency regulations or requirements of the receiver, provided all the required information is included. Copies of manifest required by this subsection may be legible carbon copies or legible photocopies.

(3) Each manifest shall include a certification by the waste generator that the transported materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the U.S. Department of Transportation and the cabinet. An authorized representative of the waste generator shall sign and date the manifest.

(4) Any licensee who transfers waste to a land disposal facility or a licensed waste collector shall comply with the following requirements. Any licensee who transfers waste to a licensed waste processor who treats or repackages waste shall comply with the requirements of paragraphs (d) through (h) of this subsection.

(a) Prepare all waste so that the waste is classified according to Section 7 of this regulation and meets the waste characteristics requirements in Section 8 of this regulation;

(b) Label each package of waste to identify whether it is Class A waste, Class B waste, or Class C waste, in accordance with Section 7 of this regulation;

(c) Conduct a quality control program to include management evaluation of audits to assure compliance with Sections 7 and 8 of this regulation;

(d) Prepare shipping manifests to meet the requirements of subsection (1) and (3) of this section;

(e) Forward a copy of the manifest to the intended recipient, at the time of shipment; or, deliver to a collector at the time the waste is collected, obtaining acknowledgment of receipt in the form of a signed copy of the manifest or equivalent documentation from the collector;

(f) Include one (1) copy of the manifest with the shipment;

(g) Retain a copy of the manifest with documentation of acknowledgment of receipt as the record of transfer of licensed material as required by these regulations;

(h) For any shipments or any part of a shipment for which acknowledgment of receipt has not been received within the times set forth in this section conduct an investigation in accordance with subsection (8) of this section.

(5) Any waste collector licensee who handles only prepackaged waste shall:

(a) Acknowledge receipt of the waste from the generator within one (1) week of receipt by returning a signed copy of the manifest or equivalent documentation;

(b) Prepare a new manifest to reflect consolidated shipments. The new manifest shall serve as a listing or index for the detailed generator manifests. Copies of the generator manifests shall be a part of the new manifest. The waste collector may prepare a new manifest without attaching the generator manifests, provided the new manifest contains for each package the information specified in subsection (2) of this section. The collector licensee shall certify that nothing has been done to the waste which would invalidate the generator's certification;

(c) Forward a copy of the new manifest to the land disposal facility operator at the time of shipment;

(d) Include the new manifest with the shipment to the disposal site;

(e) Retain a copy of the manifest with documentation of acknowledgment of receipt as the record of transfer of licensed material as required by these regulations, and retain information from generator manifests until disposition is authorized by the cabinet; and

(f) For any shipments or any part of a shipment for which acknowledgment of receipt is not received within the times set forth in this section, conduct an investigation in accordance with subsection (8) of this section.

(6) Any licensed waste processor who treats or repackages waste shall:

(a) Acknowledge receipt of the waste from the generator within one (1) week of receipt by returning a signed copy of the manifest or equivalent documentation.

(b) Prepare a new manifest that meets the requirements of subsections (1), (2), and (3) of

this section. Preparation of the new manifest shall reflect that the processor is responsible for the waste.

(c) Prepare all waste so that the waste is classified according to Section 7 of this regulation and meets the waste characteristics requirement in Section 8 of this regulation.

(d) Label each package of waste to identify whether it is Class A, Class B, or Class C, in accordance with Sections 7 and 9 of this regulation.

(e) A quality control program shall be conducted to assure compliance with Sections 7 and 8 of this regulation. The program shall include management evaluation of audits.

(f) Forward a copy of the new manifest to the disposal site operator or waste collector at the time of shipment, or deliver to a collector at the time the waste is collected, obtaining acknowledgment of receipt in the form of a signed copy of the manifest or equivalent documentation by the collector.

(g) Include the new manifest with the shipment.

(h) Retain copies of original manifests and new manifests with documentation of acknowledgment of receipt as the record of transfer of licensed material required by these regulations.

(i) For any shipment or part of a shipment for which acknowledgment is not received within the times set forth in this section, conduct an investigation in accordance with subsection (8) of this section.

(7) The land disposal facility operator shall:

(a) Acknowledge receipt of the waste within one (1) week of receipt by returning a signed copy of the manifest or equivalent documentation to the shipper. The shipper to be notified is the licensee who last possessed the waste and transferred the waste to the operator. The returned copy of the manifest or equivalent documentation shall indicate any discrepancies between materials listed on the manifest and materials received.

(b) Maintain copies of all completed manifests or equivalent documentation until the cabinet authorizes their disposition; and

(c) Notify the shipper (i.e., the generator, the collector, or processor) and the cabinet when any shipment or part of a shipment has not arrived within sixty (60) days after the advance manifest was received.

(8) Any shipment or part of a shipment for which acknowledgment is not received within the times set forth in this section must:

(a) Be investigated by the shipper if the shipper has not received notification of receipt within twenty (20) days after transfer; and

(b) Be traced and reported. The investigation shall include tracing the shipment and filing a report with the cabinet. Each licensee who conducts a trace investigation shall file a written report with the cabinet within two (2) weeks of completion of the investigation.

Section 11. Records. (1) Each licensee shall maintain records in the same units used in this regulation.

(2) Records of disposal of licensed material made pursuant to this regulation are to be maintained until the cabinet authorizes their disposition.

Section 12. Annual Report of Waste Generated. (1) Each licensee issued a specific license, pursuant to these regulations shall file an annual report with the cabinet containing information regarding low-level radioactive waste associated with activities authorized by the license. This report shall be filed regardless of whether that licensee was or was not a waste generator during the report period.

(2) The report shall contain information regarding such waste for the period of one (1) calendar year and shall be filed no later than January 15 of the following year.

(3) The report shall be filed on a form provided by the cabinet and shall contain, but not be limited to, types and amounts of generated waste and estimates of future wastes to be generated.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary

APPROVED BY AGENCY: November 1, 1985

FILED WITH LRC: November 12, 1985 at 9 a.m.

PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager,

(1) Type and number of entities affected:

(a) Direct and indirect costs or savings to those affected:

1. First year: N/A

2. Continuing costs or savings: N/A

3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A

(b) Reporting and paperwork requirements: None required.

(2) Effects on the promulgating administrative body:

(a) Direct and indirect costs or savings:

1. First year: N/A

2. Continuing costs or savings: N/A

3. Additional factors increasing or decreasing costs: N/A

(b) Reporting and paperwork requirements: None required.

(3) Assessment of anticipated effect on state and local revenues: None

(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.

(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.

(a) Necessity of proposed regulation if in conflict: N/A

(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A

(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

CABINET FOR HUMAN RESOURCES
Department for Health Services

**902 KAR 100:022. Licensing requirements for land disposal of radioactive waste.**

RELATES TO: KRS 211.842 to 211.852, 211.990(4)
PURSUANT TO: KRS 194.050, 211.090, 211.844, 211.846, 211.852
NECESSITY AND FUNCTION: The Cabinet for Human Resources is empowered by KRS 211.844 to provide by regulation for the registration and licensing of the possession or use of any source of ionizing or electronic product radiation and the handling and disposal of radioactive waste. The purpose of this regulation is to establish procedures, criteria and terms and conditions upon which the cabinet issues licenses for the land disposal of radioactive wastes received from other persons.

Section 1. Applicability. The requirements of this regulation apply to persons prescribing land disposal which involves disposal in the uppermost portion of the earth, approximately thirty (30) meters, of radioactive waste received from other persons except:
(1) Disposal of byproduct material as defined in 902 KAR 100:010 in quantities greater than 10,000 kilograms and containing more than five (5) millicuries of radium-226; or
(2) Disposal of licensed material as provided for in 902 KAR 100:021.

Section 2. Definitions. As used in this regulation, the following definitions apply:
(1) "Active maintenance" means any significant activity needed during the period of institutional control to maintain a reasonable assurance that the performance objectives in Section 18 and Section 19 of this regulation are met. Such active maintenance includes ongoing activities such as the pumping and treatment of water from a disposal unit or one-time measures such as replacement of a disposal unit cover. Active maintenance does not include custodial activities such as repair of fencing, repair or replacement of monitoring equipment, revegetation, minor additions to soil cover, minor repair of disposal unit covers, and general disposal site upkeep such as mowing grass.
(2) "Buffer zone" means a portion of the disposal site that is controlled by the licensee and that lies under the disposal units and between the disposal units and the boundary of the site.
(3) "Chelating agent" means a mine polycarboxylic acids, hydroxy-carboxylic acids, gluconic acid and polycarboxylic acids.
(4) "Commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a land disposal facility. The term does not mean disposal site exploration, necessary roads for disposal site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the disposal site or the protection of environmental values.
(5) "Custodial agency" means an agency of the government designated to act on behalf of the government owner of the disposal site.
(6) "Disposal" means the isolation of radioactive wastes from the biosphere inhabited by man and his food chains by emplacement in a land disposal facility.
(7) "Disposal site" means that portion of a land disposal facility which is used for disposal of waste. It consists of disposal units and a buffer zone.
(8) "Disposal unit" means a discrete portion of the disposal site into which waste is placed for disposal. For near-surface disposal the unit is usually a trench.
(9) "Engineered barrier" means a man-made structure or device that is intended to improve the land disposal facility's ability to meet the performance objectives in this part.
(10) "Explosive material" means any chemical compound, mixture, or device which produces a substantial instantaneous release of gas and heat spontaneously or by contact with sparks or flame.
(11) "Hazardous waste" means those wastes designated as hazardous by U.S. Environmental Protection Agency regulations in 40 CFR Part 261.
(12) "Hydrogeologic unit" means any soil or rock unit or zone which by virtue of its porosity or permeability, or lack thereof, has a distinct influence on the storage or movement of ground water.
(13) "Inadvertent intruder" means a person who might occupy the disposal site after closure and engage in normal activities, such as agriculture, dwelling construction, or other pursuits in which an individual might be unknowingly exposed to radiation for the waste.
(14) "Intruder barrier" means a sufficient depth of cover over the waste that inhibits contact with waste and helps to ensure that radiation exposures to an inadvertent intruder will meet the performance objectives set forth in this regulation, or engineered structures that provide equivalent protection to the inadvertent intruder.
(15) "Land disposal facility" means the land, buildings, and equipment which is intended to be used for the disposal of radioactive wastes into the subsurface of the land.
(16) "Monitoring" means observing and making measurements to provide data to evaluate the performance and characteristics of the disposal site.
(17) "Near-surface disposal facility" means a land disposal facility in which radioactive waste is disposed of within approximately the upper thirty (30) meters of the earth's surface.
(18) "Pyrophoric liquid" means any liquid that ignites spontaneously in dry or moist air at or below 130°F (54.5°C). A pyrophoric solid is any solid material, other than one classed as an explosive, which under normal conditions is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious transportation, handling, or disposal hazard. Included are spontaneously combustible and water-reactive materials.
(19) "Site closure and stabilization" means those actions that are taken upon completion of operations that prepare the disposal site for custodial care and that assure that the disposal site will remain stable and will not need ongoing active maintenance.
(20) "Stability" means structural stability.
(21) "Surveillance" means monitoring and observation of the disposal site for purposes of

visual detection of need for maintenance, custodial care, evidence of intrusion, and compliance with other license and regulatory requirements.

(22) "Waste" means those low-level radioactive wastes that are acceptable for disposal in a land disposal facility. For the purposes of this definition, low-level waste has the same meaning as in the Low-Level Radioactive Waste Policy Act, P.L. 96-573 that is, radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in section 11e.(2) of the Atomic Energy Act (uranium or thorium tailings and waste).

Section 3. License Required. (1) No person may receive, possess, and dispose of waste received from other persons at a land disposal facility unless authorized by a license issued by the cabinet pursuant to this regulation, and 902 KAR 100:021.

(2) Each person shall file an application with the cabinet pursuant to 902 KAR 100:040, Section 4, and obtain a license as provided in this regulation before commencing construction of a land disposal facility. Failure to comply with this requirement may be grounds for denial of a license.

Section 4. Content of Application. In addition to the requirements of set forth in 902 KAR 100:040, Section 5, an application to receive from others, possess and dispose of wastes shall consist of general information, specific technical information, institutional information, and financial information as set forth in Section 5 through Section 9 of this regulation.

Section 5. General Information. The general information shall include each of the following:

(1) Identity of the applicant including:

(a) The full name, address, telephone number and description of the business or occupation of the applicant;

(b) If the applicant is a partnership, the name and address of each partner and the principal location where the partnership does business;

(c) If the applicant is a corporation or an unincorporated association, the state where it is incorporated or organized and the principal location where it does business and the names and addresses of its directors and principal officers; and

(d) If the applicant is acting as an agent or representative of another person in filing the application, all information required under subsection (1) of this section must be supplied with respect to the other person.

(2) Qualifications of the applicant:

(a) The organizational structure of the applicant, both offsite and onsite, including a description of lines of authority and assignments of responsibilities, whether in the form of administrative directives, contract provisions, or otherwise;

(b) The technical qualifications, including training and experience, of the applicant and members of the applicant's staff to engage in the proposed activities. Minimum training and experience requirements for personnel filling key positions described in paragraph (a) of this subsection must be provided;

(c) A description of the applicant's personnel training program; and

(d) The plan to maintain an adequate complement of trained personnel to carry out waste receipt, handling, and disposal operations in a safe manner.

(3) A description of:

(a) The location of the proposed disposal site;

(b) The general character of the proposed activities;

(c) The types and quantities of radioactive waste to be received, possessed, and disposed of;

(d) Plans for use of the land disposal facility for purposes other than disposal of radioactive wastes; and

(e) The proposed facilities and equipment.

(4) Proposed schedules for construction, receipt of waste, and first emplacement of waste at the proposed land disposal facility.

Section 6. Specific Technical Information. The specific technical information shall include the following information needed for demonstration that the performance objectives and the applicable technical requirements of this regulation will be met:

(1) A description of the natural and demographic disposal site characteristics as determined by disposal site selection and characterization activities. The description shall include geologic, geotechnical, hydrologic, meteorologic, climatologic, and biotic features of the disposal site and vicinity;

(2) A description of the design features of the land disposal facility and the disposal units. For near-surface disposal, the description shall include those design features related to infiltration of water; integrity of covers for disposal units; structural stability of backfill, wastes, and covers; contact of wastes with standing water; disposal site drainage; disposal site closure and stabilization; elimination to the extent practicable of long-term disposal site maintenance; inadvertent intrusion; occupational exposures; disposal site monitoring; and adequacy of the size of the buffer zone for monitoring and potential mitigative measures;

(3) A description of the principal design criteria and their relationship to the performance objectives;

(4) A description of the design basis natural events or phenomena and their relationship to the principal design criteria;

(5) A description of codes and standards which the applicant has applied to the design and which will apply to construction of the land disposal facilities;

(6) A description of the construction and operation of the land disposal facility. The description shall include as a minimum the methods of construction of disposal units; waste emplacement; the procedures for and areas of waste segregation; types of intruder barriers; onsite traffic and drainage systems; survey control program; methods and areas of waste storage; and methods to control surface water and ground water access to the wastes. The description shall also include a description of the methods to be employed in the handling and disposal of wastes containing chelating agents or other non-radiological substances that might affect meeting the performance objectives of this regulation;

(7) A description of the disposal site closure plan, including those design features which are intended to facilitate disposal site closure and to eliminate the need for ongoing active maintenance;

(8) An identification of the known natural resources at the disposal site, whose exploitation could result in inadvertent intrusion into the low-level wastes after removal of active institutional control;

(9) A description of the kind, amount, classification and specifications of the radioactive material proposed to be received, possessed, and disposed of at the land disposal facility;

(10) A description of the quality control program for the determination of natural disposal site characteristics and for quality control during the design, construction, operation and closure of the land disposal facility and the receipt, handling, and emplacement of waste. Audits and managerial controls must be included;

(11) A description of the radiation safety program for control and monitoring of radioactive effluents to ensure compliance with the performance objective in Section 18 of this regulation and occupational radiation exposure to ensure compliance with the requirements of 902 KAR 100:020 and to control contamination of personnel, vehicles, equipment, buildings, and the disposal site. Both routine operations and accidents shall be addressed. The program description must include procedures, instrumentation, facilities, and equipment;

(12) A description of the environmental monitoring program to provide data to evaluate potential health and environmental impacts and the plan for taking corrective measures if migration of radionuclides is indicated; and

(13) A description of the administrative procedures that the applicant will apply to control activities at the land disposal facility.

Section 7. Technical Analyses. The specific technical information shall also include the following analyses needed to demonstrate that the performance objectives of these regulations will be met:

(1) Pathways analyzed in demonstrating protection of the general population from releases of radioactivity shall include air, soil, ground water, surface water, plant uptake, and exhumation by burrowing animals. The analyses shall clearly identify and differentiate between the roles performed by the natural disposal site characteristics and design features in isolating and segregating the wastes. The analyses shall clearly demonstrate that there is reasonable assurance that the exposures to humans from the release of radioactivity will not exceed the limits set forth in Section 18 of this regulation;

(2) Analyses of the protection of individuals from inadvertent intrusion shall include demonstration that there is reasonable assurance the waste classification and segregation requirements will be met and that adequate barriers to inadvertent intrusion will be provided;

(3) Analyses of the protection of individuals during operations shall include assessments of expected exposures due to routine operations and likely accidents during handling, storage, and disposal of waste. The analyses shall provide reasonable assurance that exposures will be controlled to meet the requirements of 902 KAR 100:020; and

(4) Analyses of the long-term stability of the disposal site and the need for ongoing active maintenance after closure shall be based upon analyses of active natural processes such as erosion, mass wasting, slope failure, settlement of wastes and backfill, infiltration through covers over disposal areas and adjacent soils, and surface drainage of the disposal site. The analyses shall provide reasonable assurance that there will not be a need for ongoing active maintenance of the disposal site following closure.

Section 8. Institutional Information. The institutional information submitted by the applicant shall include:

(1) A certification by the Commonwealth of Kentucky, or federal agency which owns the disposal site, that the Commonwealth of Kentucky or federal agency is prepared to accept transfer of the license when the provisions of Section 15 of this regulation are met, and will assume responsibility for custodial care after site closure and post-closure observation and maintenance; and

(2) Where the proposed disposal site is on land not owned by the Commonwealth of Kentucky or federal government, the applicant shall submit evidence that arrangements have been made for assumption of ownership in fee by the Commonwealth of Kentucky or federal agency before the cabinet issues a license.

Section 9. Financial Information. The financial information shall be sufficient to demonstrate that the financial qualifications of the applicant are adequate to carry out the activities for which the license is sought and meet other financial assurance requirements of this regulation.

Section 10. Standards for Issuance of a License. A license for the receipt, possession, and disposal of waste containing or contaminated with radioactive material shall be issued by the cabinet upon finding that:

(1) The issuance of the license will not constitute an unreasonable risk to the health and safety of the public;

(2) The applicant is qualified by reason of training and experience to carry out the disposal operations requested in a manner that protects health and minimizes danger to life and property;

(3) The applicant's proposed disposal site, disposal design, land disposal facility operations, including equipment, facilities, and procedures, disposal site closure, and post-closure institutional care are adequate to protect the public health and safety in that they provide reasonable assurance that the general population will be protected from releases of radioactivity as specified in the performance objective in Section 18 of this regulation;

(4) The applicant's proposed disposal site, disposal site design, land disposal facility operations, including equipment, facilities, and procedures, disposal site closure, and post-closure institutional control are adequate to protect the public health and safety in that they will provide reasonable assurance that

individual inadvertent intruders are protected in accordance with the performance objective in Section 19 of this regulation;

(5) The applicant's proposed disposal facility operations, including equipment, facilities, and procedures, are adequate to protect the public health and safety in that they will provide reasonable assurance that the standards for radiation protection set out in 902 KAR 100:020 will be met;

(6) The applicant's proposed disposal site, disposal site design, land disposal facility operations, disposal site closure, and post-closure institutional care are adequate to protect the public health and safety in that they will provide reasonable assurance that long-term stability of the disposed waste and the disposal site will be achieved and will eliminate to the extent practicable the need for ongoing active maintenance of the disposal site following closure;

(7) The applicant's demonstration provides reasonable assurance that the applicable technical requirements of this regulation will be met;

(8) The applicant's proposal for institutional control provides reasonable assurance that such care will be provided for the length of time found necessary to ensure the findings in Section 10(3) through (6) of this regulation and that the institutional control meets the requirements of Section 27 of this regulation; and

(9) The information on financial assurances meets the requirements of this regulation.

Section 11. Conditions of Licenses. (1) A license issued under this regulation, or any right thereunder, may be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, only if the cabinet finds, after securing full information, that the transfer is in accordance with the provisions of the Act and gives its consent in writing in the form of a license amendment.

(2) The licensee shall submit written statements under oath upon request of the cabinet, at any time before termination of the license, to enable the cabinet to determine whether or not the license should be modified, suspended, or revoked.

(3) The license will be terminated only on the full implementation of the final closure plan as approved by the cabinet, including post-closure observation and maintenance.

(4) The licensee shall be subject to the provisions of the Act now or hereafter in effect, and to all rules, regulations, and orders of the cabinet. The terms and conditions of the license are subject to amendment, revision, or modification, by reason of amendments to, or by reason of rules, regulations, and orders issued in accordance with the terms of the Act.

(5) Each person licensed by the cabinet pursuant to this regulation shall confine possession and use of materials to the locations and purposes authorized in the license.

(6) The licensee shall not dispose of waste until the cabinet has inspected the land disposal facility and has found it to be in conformance with the description, design, and construction described in the application for a license.

(7) The cabinet may incorporate in any license at the time of issuance, or thereafter, by appropriate rule, regulation or order, additional requirements and conditions with respect to the licensee's receipt, possession, and disposal of waste as it deems appropriate or necessary in order to:

(a) Protect health or to minimize danger to life or property; and

(b) Require reports and the keeping of records, and to provide for inspections of activities under the license that may be necessary or appropriate to effectuate the purposes of the Act and regulations thereunder.

(8) The authority to dispose of wastes expires on the date stated in the license. Any expiration date on a license applies only to the above-ground activities and to the authority to dispose of waste. Failure to renew the license shall not relieve the licensee of responsibility for carrying out site closure, post-closure observation and transfer of the license to the site owner.

Section 12. Application for Renewal or Closure. (1) An application for renewal or an application for closure must be filed at least ninety (90) days prior to license expiration.

(2) Applications for renewal of a license must be filed in accordance with Sections 4 through 9 of this regulation. Applications for closure must be filed in accordance with Section 13 of this regulation. Information contained in previous applications, statements or reports filed with the cabinet under the license may be incorporated by reference if the references are clear and specific.

(3) In any case in which a licensee has filed an application in proper form for renewal of a license, the license does not expire until the cabinet has taken action on the application for renewal.

(4) In determining whether a license will be renewed, the cabinet will apply the criteria set forth in Section 10 of this regulation.

Section 13. Contents of Application for Closure. (1) Prior to final closure of the disposal site, or as otherwise directed by the cabinet, the applicant shall submit an application to amend the license for closure. This closure application shall include a final revision and specific details of the disposal site closure plan included as part of the license application submitted under Section 6(7) of this regulation that includes each of the following:

(a) Any additional geologic, hydrologic, or other data pertinent to the long-term containment of emplaced wastes obtained during the operational period;

(b) The results of tests, experiments, or any other analyses relating to backfill of excavated areas, closure and sealing, waste migration and inter-action with emplacement media, or any other tests, experiments or analysis pertinent to the long-term containment of emplaced waste within the disposal site;

(c) Any proposed revision of plans for:

1. Decontamination and/or dismantlement of surface facilities;

2. Backfilling of excavated areas; or

3. Stabilization of the disposal site for post-closure care.

(d) Any significant new information regarding the environmental impact of closure activities and long-term performance of the disposal site.

(2) Upon review and consideration of an application to amend the license for closure submitted in accordance with subsection (1) of this section, the cabinet shall issue an amendment authorizing closure if there is reasonable assurance that the long-term performance objectives of this regulation will be met.

Section 14. Post-closure Observation and Maintenance. The licensee shall observe, monitor, and carry out necessary maintenance and repairs at the disposal site until the site closure is complete and the license is transferred by the cabinet in accordance with Section 15 of this regulation. Responsibility for the disposal site must be maintained by the licensee for five (5) years. A shorter or longer time period for post-closure observation and maintenance may be established and approved as part of the site closure plan, based on site-specific conditions.

Section 15. Transfer of License. Following closure and the period of post-closure observation and maintenance, the licensee may apply for an amendment to transfer the license to the disposal site owner. The license shall be transferred when the cabinet finds:

(1) That the closure of the disposal site has been made in conformance with the licensee's disposal site closure plan, as amended and approved as part of the license;

(2) That reasonable assurance has been provided by the licensee that the performance objectives of this regulation are met;

(3) That any funds and necessary records for care will be transferred to the disposal site owner;

(4) That the post-closure monitoring program is operational for implementation by the disposal site owner; and

(5) That the Commonwealth of Kentucky or federal agency which will assume responsibility for institutional control of the disposal site is prepared to assume responsibility and ensure that the institutional requirements found necessary under Section 10(8) of this regulation will be met.

Section 16. Termination of License. (1) Following any period of institutional control needed to meet the requirements found necessary under Section 10 of this regulation, the licensee may apply for an amendment to terminate the license.

(2) This application will be reviewed in accordance with the provisions of 902 KAR 100:040, Section 4.

(3) A license is terminated only when the cabinet finds:

(a) That the institutional control requirements found necessary under Section 10(8) of this regulation have been met; and

(b) That any additional requirements resulting from new information developed during the institutional control period have been met, and that permanent monuments or markers warning against intrusion have been installed.

Section 17. General Requirement. Land disposal facilities shall be sited, designed, operated, closed, and controlled after closure so that reasonable assurance exists that exposures to individuals are within the limits established in the performance objectives in Section 18 through Section 21 of this regulation.

Section 18. Protection of the General Population from Releases of Radioactivity. Concentrations of radioactive material which may be released to the general environment in ground water, surface water, air, soil, plants, or animals must not result in an annual dose exceeding an equivalent of twenty-five (25) millirems to the whole body, seventy-five (75) millirems to the thyroid, and twenty-five (25) millirems to any other organ of any member of the public. Reasonable effort shall be made to maintain releases of radioactivity in effluents to the general environment as low as it is reasonably achievable.

Section 19. Protection of Inadvertent Intrusion. Design, operation, and closure of the land disposal facility shall ensure protection of any individual inadvertently intruding into the disposal site and occupying the site or contacting the waste at any time after active institutional controls over the disposal site are removed.

Section 20. Protection of Individuals During Operations. Operations at the land disposal facility shall be conducted in compliance with the standards for radiation protection set out in 902 KAR 100:020, except for releases of radioactivity in effluents from the and disposal facility, which shall be governed by Section 18 of this regulation. Every reasonable effort shall be made to maintain radiation exposures as low as is reasonably achievable.

Section 21. Stability of the Disposal Site After Closure. The disposal facility shall be sited, designed, used, operated, and closed to achieve long-term stability of the disposal site and to eliminate to the extent practicable the need for ongoing active maintenance of the disposal site following closure so that only surveillance, monitoring, or minor custodial care are required.

Section 22. Disposal Site Suitability Requirements for Land Disposal. Disposal site suitability for near-surface disposal. The following are the minimum characteristics a disposal site shall have to be acceptable for use as a near-surface disposal facility:

(1) The primary emphasis in disposal site suitability is isolation of wastes, and the disposal site features that ensure that the long-term performance objectives are met.

(2) The disposal site shall be capable of being characterized, modeled, analyzed and monitored.

(3) Within the region where the facility is to be located, a disposal site should be selected so that projected population growth and future developments are not likely to affect the ability of the disposal facility to meet the performance objectives of this regulation.

(4) Areas shall be avoided having known natural resources which, if exploited, would result in failure to meet the performance objectives of this regulation.

(5) The disposal site shall be generally well

drained and free of areas of flooding or frequent ponding. Waste disposal shall not take place in a 100-year flood plain, coastal high-hazard area or wetland, as defined in U.S. Executive Order 11988, "Floodplain Management Guidelines."

(6) Upstream drainage areas shall be minimized to decrease the amount of runoff which could erode or inundate waste disposal units.

(7) The disposal site shall provide sufficient depth to the water table that ground water intrusion, perennial or otherwise, into the waste will not occur. The cabinet will consider an exception to this requirement to allow disposal below the water table if it can be conclusively shown that disposal site characteristics will result in molecular diffusion being the predominant means of radionuclide movement and the rate of movement will result in the performance objectives being met. In no case will waste disposal be permitted in the zone of fluctuation of the water table.

(8) The hydrogeologic unit used for disposal shall not discharge ground water to the surface within the disposal site.

(9) Areas shall be avoided where tectonic processes such as faulting, folding, seismic activity, or vulcanism may occur with such frequency and extent to significantly affect the ability of the disposal site to meet the performance objectives of this regulation or may preclude defensible modeling and prediction of long-term impacts.

(10) Areas shall be avoided where surface geologic processes such as mass wasting, erosion, slumping, landsliding, or weathering occur with such frequency and extent to significantly affect the ability of the disposal site to meet the performance objectives of this regulation, or may preclude defensible modeling and prediction of long-term impacts.

(11) The disposal site must not be located where nearby facilities or activities could adversely impact the ability of the site to meet the performance objectives of this regulation or significantly mask the environmental monitoring program.

Section 23. Disposal Site Design for Land Disposal. Disposal site design for near-surface disposal. (1) Site design features shall be directed toward long-term isolation and avoidance of the need for continuing active maintenance after site closure.

(2) The disposal site design and operation shall be compatible with the disposal site closure and stabilization plan and lead to disposal site closure that provides reasonable assurance that the performance objectives will be met.

(3) The disposal site shall be designed to complement and improve, where appropriate, the ability of the disposal site's natural characteristics to assure that the performance objectives will be met.

(4) Covers shall be designed to minimize to the extent practicable water infiltration, to direct percolating or surface water away from the disposed waste, and to resist degradation by surface geologic processes and biotic activity.

(5) Surface features shall direct surface water drainage away from disposal units at velocities and gradients which will not result in erosion that will require ongoing active maintenance in the future.

(6) The disposal site shall be designed to minimize to the extent practicable the contact of water with waste during storage, the contact of standing water with waste during disposal, and the contact of percolating or standing water with wastes after disposal.

Section 24. Land Disposal Facility Operation and Disposal Site Closure. Near-surface disposal facility operation and disposal site closure. (1) Wastes designated as Class A pursuant to 902 KAR 100:021 shall be segregated from other wastes by placing in disposal units which are sufficiently separated from disposal units for the other waste classes so that any interaction between Class A wastes and other wastes will not result in the failure to meet the performance objectives of this regulation. This segregation is not necessary for Class A wastes if they meet the stability requirements in 902 KAR 100:021, Section 8(2).

(2) Wastes designated as Class C pursuant to 902 KAR 100:021 shall be disposed of so that the top of the waste is a minimum of five (5) meters below the top surface of the cover or must be disposed of with intruder barriers that are designed to protect against an inadvertent intrusion for at least 500 years.

(3) Except as provided in subsection (1) of this section only waste classified as Class A, B, or C shall be acceptable for near-surface disposal. All waste shall be disposed of in accordance with requirements of subsections (4) through (11) of this section.

(4) Wastes shall be emplaced in a manner that maintains the package integrity during emplacement, minimizes the void spaces between packages, and permits the void spaces to be filled.

(5) Void spaces between waste packages shall be filled with earth or other material to reduce future subsidence within the fill.

(6) Waste shall be placed and covered in a manner that limits the radiation dose rate at the surface of the cover to levels that at a minimum will permit the licensee to comply with all provisions of 902 KAR 100:020, Section 7, at the time the license is transferred pursuant to Section 15 of this regulation.

(7) The boundaries and locations of each disposal unit shall be accurately located and mapped by means of a land survey. Near-surface disposal units shall be marked in such a way that the boundaries of each unit can be easily defined. Three (3) permanent survey marker control points, referenced to United States Geological Survey (USGS) or National Geodetic Survey (NGS) survey control stations, shall be established on the site to facilitate surveys. The USGS or NGS control stations shall provide horizontal and vertical controls as checked against USGS or NGS record files.

(8) A buffer zone of land shall be maintained between any buried waste and the disposal site boundary and beneath the disposed waste. The buffer zone shall be of adequate dimensions to carry out environmental monitoring activities specified in Section 25(4) of this regulation and take mitigative measures if needed.

(9) Closure and stabilization measures set forth in the approved site closure plan shall be carried out as each disposal unit is filled and covered.

(10) Active waste disposal operations shall not have an adverse effect on completed closure

and stabilization measures.

(11) Only wastes containing or contaminated with radioactive materials shall be disposed of at the disposal site.

(12) Proposals for disposal of waste that is not generally acceptable for near-surface disposal because the waste form and disposal methods must be different, and in general more stringent that those specified for Class C waste, may be submitted to the cabinet for approval.

Section 25. Environmental Monitoring. (1) At the time a license application is submitted, the applicant shall have conducted a preoperational monitoring program to provide basic environmental data on the disposal site characteristics. The applicant shall obtain information about the ecology, meteorology, climate, hydrology, geology, geochemistry, and seismology of the disposal site. For those characteristics that are subject to seasonal variation, data must cover at least a twelve (12) month period.

(2) During the land disposal facility site construction and operation, the licensee shall maintain an environmental monitoring program. Measurements and observations must be made and recorded to provide data to evaluate the potential health and environmental impacts during both the construction and the operation of the facility and to enable the evaluation of long-term effects and the need for mitigative measures. The monitoring system must be capable of providing early warning of releases of radionuclides from the disposal site before they leave the site boundary.

(3) After the disposal site is closed, the licensee responsible for post-operational surveillance of the disposal site shall maintain a monitoring system based on the operating history and the closure and stabilization of the disposal site. The monitoring system must be capable of providing early warning of releases of radionuclides from the disposal site before they leave the site boundary.

(4) The licensee shall have plans for taking corrective measures if the environmental monitoring program detects migration of radionuclides which would indicate that the performance objectives may not be met.

Section 26. Alternative Requirements for Design and Operations. The cabinet may, upon request or on its own initiative, authorize provisions other than those set forth in Sections 23 through 25 of this regulation for the segregation and disposal of waste and for the design and operation of a land disposal facility on a specific basis, if it finds reasonable assurance of compliance with the performance objectives of this regulation.

Section 27. Institutional Requirements. (1) Land ownership. Disposal of radioactive waste received from other persons may be permitted only on land owned, in fee, by the Commonwealth of Kentucky or federal government.

(2) Institutional control. The land owner or custodial agency shall carry out an institutional control program to physically control access to the disposal site following transfer of control of the disposal site from the disposal site operator. The institutional control program shall also include, but not be limited to, carrying out an environmental monitoring program at the disposal site, periodic surveillance, minor custodial care, and other requirements as determined by the cabinet; and administration of funds to cover the costs for these activities. The period of controls will be determined by the cabinet, but controls may not be relied upon for more than 100 years following transfer of control of the disposal site to the owner.

Section 28. Alternative Requirements for Waste Classification and Characteristics. The cabinet licensing a low-level disposal facility may, upon request or on its own initiative, authorize other provisions for the classification and characteristics of waste on a specific basis, if, after evaluation of the specific characteristics of the waste, disposal site, method of disposal, it finds reasonable assurance of compliance with the performance objectives specified in this regulation.

Section 29. Applicant Qualifications and Assurances. Each applicant shall show that it either possesses the necessary funds or has reasonable assurance of obtaining the necessary funds, or by a combination of the two, to cover the estimated costs of conducting all licensed activities over the planned operating life of the project, including costs of construction and disposal.

Section 30. Funding for Disposal Site Closure and Stabilization. (1) The applicant shall provide assurances prior to the commencement of operations that sufficient funds will be available to carry out disposal site closure and stabilization, including:

(a) Decontamination or dismantlement of land disposal facility structures;

(b) Closure and stabilization of the disposal site so that following transfer of the disposal site to the site owner, the need for ongoing active maintenance is eliminated to the extent practicable and only minor custodial care, surveillance, and monitoring are required; and

(c) Assurances shall be based on cabinet approved cost estimates reflecting the cabinet approved plan for disposal site closure and stabilization. The applicant's cost estimates must take into account total costs that would be incurred if an independent contractor were hired to perform the closure and stabilization work.

(2) In order to avoid unnecessary duplication and expense, the cabinet will accept financial sureties that have been consolidated with earmarked financial or surety arrangements established to meet requirements of other federal or state agencies and/or local governing bodies for such decontamination, closure and stabilization. The cabinet will accept these arrangements only if they are considered adequate to satisfy these requirements and that the portion of the surety which covers the closure of the disposal site is clearly identified and committed for use in accomplishing these activities.

(3) The licensee's surety mechanism will be submitted annually for review by the cabinet to assure that sufficient funds are available for completion of the closure plan, assuming that the work has to be performed by an independent contractor.

(4) The amount of surety liability should

change in accordance with the predicted cost of future closure and stabilization. Factors affecting closure and stabilization cost estimates include: inflation; increases in the amount of disturbed land; changes in engineering plans; closure and stabilization that has already been accomplished and any other conditions affecting costs. This will yield a surety that is at least sufficient at all times to cover the costs of closure of the disposal units that are expected to be used before the next license renewal.

(5) The term of the surety mechanism shall be open unless it can be demonstrated that another arrangement would provide an equivalent level of assurance. This assurance could be provided with a surety mechanism which is written for a specified period of time (e.g., five (5) years) yet which shall be automatically renewed unless the party who issues the surety notifies the cabinet and the beneficiary (the site owner) and the principal (the licensee) not less than ninety (90) days prior to the renewal date of its intention not to renew. In such a situation the licensee must submit a replacement surety within thirty (30) days after notification of cancellation. If the licensee fails to provide a replacement surety acceptable to the cabinet, the site owner may collect on the original surety.

(6) Proof of forfeiture shall not be necessary to collect the surety so that in the event that the licensee could not provide an acceptable replacement surety within the required time, the surety shall be automatically collected prior to its expiration. The conditions described above would have to be clearly stated on any surety instrument which is not open-ended, and shall be agreed to by all parties. Liability under the surety mechanism shall remain in effect until the closure and stabilization program has been completed and approved by the cabinet and the license has been transferred to the site owner.

(7) Financial surety arrangements generally acceptable to the cabinet include: surety bonds, cash deposits, certificates of deposit, deposits of government securities, escrow accounts, irrevocable letters or lines of credit, trust funds, and combinations of the above or such other types of arrangements as may be approved by the cabinet. However, self-insurance, or any arrangement which essentially constitutes pledging the assets of the licensee, will not satisfy the surety requirement for private sector applicants since this provides no additional assurance other than that which already exists through license requirements.

Section 31. Financial Assurances for Institutional Controls. (1) Prior to the issuance of the license, the applicant shall provide for cabinet review and approval a copy of a binding arrangement, such as a lease, between the applicant and the disposal site owner that ensures that sufficient funds will be available to cover the costs of monitoring and any required maintenance during the institutional control period. The binding arrangement will be reviewed periodically by the cabinet to ensure that changes in inflation, technology and disposal facility operations are reflected in the arrangements.

(2) Subsequent changes to the binding arrangement specified in subsection (1) of this section relevant to institutional control shall be submitted to the cabinet for approval.

Section 32. Maintenance of Records, Reports, and Transfers. (1) Each licensee shall maintain any records and make any reports in connection with the licensed activities as may be required by the conditions of the license or by the rules, regulations, and orders of the cabinet.

(2) Records which are required by these regulations or by license conditions shall be maintained for a period specified by the appropriate regulations in this section or by license condition. If a retention period is not otherwise specified. these records must be maintained and transferred to the officials specified in subsection (5) of this section as a condition of license termination unless the cabinet otherwise authorizes their disposition.

(3) Records which shall be maintained pursuant to this section may be the original or a reproduced copy or microfilm if this reproduced copy or microfilm is capable of producing copy that is clear and legible at the end of the required retention period.

(4) If there is a conflict between the cabinet's regulations, license condition, or other written cabinet approval or authorization pertaining to the retention period for the same type of record, the longest retention period specified takes precedence.

(5) Notwithstanding subsections (1) through (4) of this section, copies of records of the location and the quantity of radioactive wastes contained in the disposal site must be transferred upon license termination to the chief executive of the nearest municipality, the chief executive of the county in which the facility is located, the county zoning board or land development and planning agency, the state governor and other state, local and federal governmental agencies as designated by the cabinet at the time of license termination.

(6) Following receipt and acceptance of a shipment of radioactive waste, the licensee shall record the date of disposal of the waste, the location in the disposal site, the condition of the waste packages as received, any discrepancies between materials listed on the manifest and those received, and any evidence of leaking or damaged packages or radiation or contamination levels in excess of limits specified in U.S. Department of Transportation and cabinet regulations. The licensee shall briefly describe any repackaging operations of any of the waste packages included in the shipment, plus any other information required by the cabinet as a license condition.

(7) Each licensee authorized to dispose of radioactive waste received from other persons shall file a copy of its financial report or a certified financial statement annually with the cabinet in order to update the information base for determining financial qualifications.

(8)(a) Each licensee authorized to dispose of waste materials received from other persons, pursuant to this regulation, shall submit annual reports to the cabinet. Reports shall be submitted by the end of the first calendar quarter of each year for the preceding year;

(b) The reports shall include:

1. Specification of the quantity of each of the principal radionuclides released to unrestricted areas in liquid and in airborne effluents during the preceding year;

2. The results of the environmental monitoring

program;
3. A summary of licensee disposal unit survey and maintenance activities;
4. A summary, by waste class, of activities and quantities of radionuclides disposed of;
5. Any instances in which observed site characteristics were significantly different from those described in the application for a license; and
6. Any other information the cabinet may require.
(c) If the quantities of radioactive materials released during the reporting period, monitoring results, or maintenance performed are significantly different from those expected in the materials previously reviewed as part of the licensing action, the report must cover this specifically.

Section 33. Tests at Land Disposal Facilities. Each licensee shall perform, or permit the cabinet to perform, any tests the cabinet deems appropriate or necessary for the administration of this regulation, including, but not limited to, tests of:
(1) Radioactive wastes and facilities used for the receipt, storage, treatment, handling, and disposal of radioactive wastes;
(2) Radiation detection and monitoring instruments; and
(3) Other equipment and devices used in connection with the receipt, possession, handling, treatment, storage, or disposal of radioactive waste.

Section 34. Cabinet Inspections of Land Disposal Facilities. (1) Each licensee shall afford to the cabinet at all reasonable times opportunity to inspect radioactive waste not yet disposed of, and the premises, equipment, operations, and facilities in which radioactive wastes are received, possessed, handled, treated, stored, or disposed.
(2) Provide the cabinet with any necessary equipment to meet the activities such as monitoring, surveying, and recordkeeping as required by this section.
(3) Each licensee shall make available to the cabinet for inspection, upon reasonable notice, records kept by it pursuant to this regulation. Authorized representatives of the cabinet may copy and take away copies of, for the cabinet's use, any record required to be kept pursuant to this regulation.

C. HERNANDEZ, M.D., M.P.H., Commissioner
E AUSTIN, JR., Secretary
APPROVED BY AGENCY: October 29, 1985
FILED WITH LRC: November 12, 1985 at 11 a.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation has been scheduled for December 23, 1985 at 9 a.m., in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. However, this hearing will be cancelled unless interested persons notify the following office in writing by December 18, 1985 of their desire to appear and testify at the hearing: R. Hughes Walker, General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: E. Edsel Moore, Manager
(1) Type and number of entities affected:
(a) Direct and indirect costs or savings to those affected:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs (note any effects upon competition): N/A
(b) Reporting and paperwork requirements: None required.
(2) Effects on the promulgating administrative body:
(a) Direct and indirect costs or savings:
1. First year: N/A
2. Continuing costs or savings: N/A
3. Additional factors increasing or decreasing costs: N/A
(b) Reporting and paperwork requirements: None required.
(3) Assessment of anticipated effect on state and local revenues: None
(4) Assessment of alternative methods; reasons why alternatives were rejected: No alternate method available.
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None. Regulations must be compatible with United States Nuclear Regulatory Commission.
(a) Necessity of proposed regulation if in conflict: N/A
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions: N/A
(6) Any additional information or comments: None

Tiering:
Was tiering applied? Yes.

## CABINET FOR HUMAN RESOURCES
## Department for Social Services
## Children's Residential Services

**905 KAR 7:220. Owensboro Treatment Center Policy Manual.**

RELATES TO: KRS Chapter 208
PURSUANT TO: KRS 194.050
NECESSITY AND FUNCTION: P.L. 97-35, Subpart C, "Social Services Block Grant - Title XX" authorizes grants to states for the provision of social services. KRS 194.050 authorizes the Cabinet for Human Resources to adopt such rules and regulations as are necessary to implement programs mandated by federal law, or to qualify for receipt of federal funds and as are necessary to cooperate with federal agencies for the proper administration of the cabinet and its programs. The function of this regulation is to implement a program for the care and treatment of children who are delinquent.

Section 1. Residential Facility Manual. The Cabinet for Human Resources hereby adopts by reference as operating policies and procedures the Owensboro Treatment Center Policy and Procedures Manual revised through October 11, 1985. This manual sets forth the policies and procedures for the care and treatment of juveniles residing in the Owensboro Treatment Center. This manual may be reviewed during regular working hours at the Office of the Commissioner, Department for Social Services, 275 East Main Street, Frankfort, Kentucky.

E. AUSTIN, Jr., Secretary
ANNA GRACE DAY, Commissioner
APPROVED BY AGENCY: November 12, 1985
FILED WITH LRC: November 14, 1985 at 1 p.m.
PUBLIC HEARING SCHEDULED: A public hearing on this regulation will be held on December 23, 1985, at 9 a.m. in the Department for Health Services Auditorium, 275 East Main Street, Frankfort, Kentucky. Those interested in attending this hearing shall notify in writing the following office by December 18, 1985: R. Hughes Walker, Office of General Counsel, Cabinet for Human Resources, 275 East Main Street, 4 West, Frankfort, Kentucky 40621.

REGULATORY IMPACT ANALYSIS

Agency Contact Person: Margaret Hockensmith
(1) Type and number of entities affected: One.
(a) Direct and indirect costs or savings to those affected: None - policies already in effect.
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs (note any effects upon competition):
(b) Reporting and paperwork requirements:
(2) Effects on the promulgating administrative body: None.
(a) Direct and indirect costs or savings:
1. First year:
2. Continuing costs or savings:
3. Additional factors increasing or decreasing costs:
(b) Reporting and paperwork requirements:
(3) Assessment of anticipated effect on state and local revenues: None.
(4) Assessment of alternative methods; reasons why alternatives were rejected: N/A
(5) Identify any statute, administrative regulation or government policy which may be in conflict, overlapping, or duplication: None.
(a) Necessity of proposed regulation if in conflict:
(b) If in conflict, was effort made to harmonize the proposed administrative regulation with conflicting provisions:
(6) Any additional information or comments:

Tiering:
Was tiering applied? No. Applies to only one facility.

## ADMINISTRATIVE REGULATION REVIEW SUBCOMMITTEE
### Minutes of the November 11-12, 1985 Meeting

The November meeting of the Administrative Regulation Review Subcommittee was held on Monday, November 11, 1985 at 2 p.m. and on Tuesday, November 12, 1985 at 10 a.m. in Room 103. Representative Bill Brinkley, Chairman, called the meeting to order, and the secretary called the roll. On motion of Representative Bruce, seconded by Senator McCuiston, the minutes of the October 7-8, 1985 meeting were approved.

Present were:

Members: Representative Bill Brinkley, Chairman; Senators Pat McCuiston, Harold Haering, and Bill Quinlan; Representatives James Bruce and Joe Meyer.

Guests: Representative Don Blandford; Richard Casey, and Joyce A. Bryan, KHEAA; Keith A. George, Larry C. Moore, and Alex W. Rose, Revenue Cabinet; Carl T. Miller, Jr., Board of Veterinary Examiners; Gary Bale, Clara DeMoss, Robert Elder, Ron Moubray, Elizabeth Nelli, and Pete Royse, Department of Education; Carl B. Larsen, Harness Racing Commission; Carl VanCleve, and Judith G. Walden, Department of Housing, Buildings and Construction; Barbara Coleman, Ked Fitzpatrick, Margeret Hockensmith, N. Clifton Howard, Stan Smith, Thomas A. Thompson, and Mark Yancey, Cabinet for Human Resources; Roger Cole, and E. Tony Marraccini, Transportation Cabinet; Etta Ruth Kepp, Office for Policy and Management; Ron Sheets, Kentucky Association of Electric Cooperatives; John Wade Hendricks, and Katherine K. Yunker, Kentucky Cable Television Association; Angie Workman, National Federation of Independent Business; Teresa Champion, Ky. Association of Health Care Facilities.

LRC Staff: Susan Wunderlich, Joe Hood, Gregory Karambellas, June Mabry, Donna Valencia, Chris Lilly, Jim Monsour, and Carla Arnold.

**The Subcommittee had no objections to the following regulation, but makes the following recommendations or statements:**

**Education and Huanities Cabinet: Department of Education: Office of Local Services: School District Finance**

702 KAR 3:100 (Data form, professional staff.) The Subcommittee questioned the financial impact of this regulation on the state and on local school districts. The agency said that an additional cost of approximately $50,000 would be incurred by the state in allowing teachers to receive salary increases during the 185-day school year. The agency stated that local school district expenses would be reimbursed from the Foundation Program. Senator Haering moved that the following statement be attached to the regulation: "The subcommittee recommends that the Interim Joint Committee on Education review the financial impact of this regulation on the Foundation Program and local school districts, and asks the Department of Education to provide additional information for the regulatory impact analysis." The motion passed, 4 to 1, with Representative Meyer voting no.

**The Subcommittee determined that the following regulations complied with KRS Chapter 13A:**

**Legislative Research Commission: Computer Information Access**

1 KAR 5:010 (Accession of public records by means of electronic data processing procedures.) This regulation was technically amended to provide for the manner in which requests would be prioritized.

**Higher Education Assistance Authority: KHEAA Grant Programs**
11 KAR 5:010 (Authority, purpose, name of grant program.)
**Work Study Program**
11 KAR 6:010 (Commonwealth Work Study Program.)

**Higher Education Student Loan Corporation: Guaranteed Student Loans and Loans to Parents**
15 KAR 1:021 (Repeal of 15 KAR 1:020.)

**Revenue Cabinet: Sales and Use Tax; Miscellaneous Retail Transactions**
103 KAR 28:051 (Leases and rentals.) The following amendments were made by the agency and subcommittee to this regulation: Amends Section 1 to reflect exclusion from gross receipts of separately stated property tax charges; amends portions of the regulation exempt leasing or rental of real property or a transaction which provides a service; amends Section 3 to clarify that living quarters are not subject to the tax; amends Section 4 to clarify the exemption available to common carrers.

**Finance and Administration Cabinet: Board of Veterinary Examiners**
201 KAR 16:010 (Code of conduct.)

**Education and Humanities Cabinet: Department of Education: Office of Local Services: School District Finance**
702 KAR 3:020 (Bond issue approval.)
**Pupil Transportation**
702 KAR 5:140 (Reimbursement for midday transportation of kindergarten pupils.)
**Office of Instruction: Instructional Services**
704 KAR 3:355 (Essential skills remediation.)
**Elementary and Secondary Education Act**
704 KAR 10:022 (Elementary, middle and secondary schools standards.)
**Teacher Certification**
704 KAR 20:005 (Kentucky standards for preparation program approval.)

**Public Protection and Regulation Cabinet: Public Service Commission: Kentucky Harness Racing Commission: Harness Racing Rules**
811 KAR 1:070 (Licensing; owners, drivers, trainers, grooms and agents.) The agency and subcommittee technically amended this regulation to specify the standards for safety helmets and to incorporate these standards by reference.
811 KAR 1:075 (Racing and track rules.)

**Housing, Buildings and Construction: Kentucky Building Code**
815 KAR 7:031 (Repeal of 815 KAR 7:030.)
**Plumbing**
815 KAR 20:120 (Water supply and distribution.)

**Cabinet for Human Resources: Department for Health Services: Local Boards of Health**
902 KAR 8:020 (Policies and procedures for local health department operations.)
**Hospitalization of Mentally Ill/Mentally Retarded**
902 KAR 12:080 (Policies and procedures for mental health/mental retardation facilities.)
**Emergency Medical Technicians**
902 KAR 13:020 (Applicants' requirements; priority for training.)
902 KAR 13:030 (Fees.)
902 KAR 13:050 (Training, examination and certification.)
902 KAR 13:070 (Instructors and trainers.)
902 KAR 13:080 (Authorized procedures.)
**Department for Social Insurance: Medical Assistance**
904 KAR 1:010 (Payments for physicians' services.) The Subcommittee had no objection to this regulation. However, it approved a motion by Representative Bruce that a letter be sent to the Department for Social Insurance asking for a detailed explanation of why the Department felt it necessary to promulgate so many emergency regulations.
904 KAR 1:022 (Skilled nursing facility services.
904 KAR 1:031 (Payments for home health services.)
**Public Assistance**
904 KAR 2:006 (Technical requirements; AFDC.)
**Department for Social Services: Community Action Agencies**

**The following regulation was filed only as an emergency, and the Subcommittee had no objection:**
905 KAR 6:020E (State plan for CSBG program.)

**The following regulations were deferred at the agency's request:**

**Public Protection and Regulation Cabinet: Public Service Commission: Utilities**
807 KAR 5:006 (General rules.)
**Harness Racing Commission: Quarter Horse, Appaloosa, and Arabian Commission**
812 KAR 1:050 (Jockeys.)

The Subcommittee had no objections to emergency regulations which had been filed.

The Subcommittee adjourned at 10:30 a.m. until December 9, 1985.

# CUMULATIVE SUPPLEMENT

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# LOCATOR INDEX -- EFFECTIVE DATES

NOTE: Emergency regulations expire 90 days from publication or upon replacement or repeal.

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| 804 KAR 4:250 | 360 | 9-11-84 |
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| 804 KAR 11:030 | 1968 | 8-13-85 |
| 812 KAR 1:050 | | |
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| 902 KAR 20:132 | | |
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## VOLUME 12

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| 101 KAR 1:051E | 643 | 10-29-85 |
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| Replaced | 347 | 10-8-85 |
| 301 KAR 2:220E | 468 | 10-1-85 |
| 302 KAR 1:030E | 99 | 7-2-85 |
| Replaced | 345 | 9-10-85 |
| 302 KAR 20:010E | 101 | 7-2-85 |
| Replaced | 220 | 9-10-85 |
| 302 KAR 20:065E | 102 | 7-2-85 |
| Replaced | 221 | 9-10-85 |
| 302 KAR 31:010E | 648 | 10-29-85 |
| 600 KAR 1:045E | 315 | 7-26-85 |
| Replaced | 293 | 9-10-85 |
| 603 KAR 5:070E | 104 | 7-8-85 |
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| 704 KAR 3:355E | 391 | 7-13-85 |
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| 815 KAR 7:013E | 472 | 9-25-85 |
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| 904 KAR 1:013E | 317 | 8-2-85 |
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| 904 KAR 1:015E | 319 | 8-2-85 |
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| 904 KAR 1:031E | 319 | 8-2-85 |
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