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TITLE 3

Accountancy, Board of Public

OCTOBER 1982

3-02-02-04. Fee for annual registration and licensure. The annual registration fee for every person legally certified to practice as a certified public accountant and every person legally licensed to practice as a licensed public accountant within this state shall be ~~thirty~~ forty dollars. The fee for nonresidents shall be ~~twenty~~ thirty dollars.

History: Amended effective August 1, 1981; October 1, 1982.
General Authority: NDCC 43-02.1-02(6)(d)
Law Implemented: NDCC 43-02.1-06

3-02-02-05. Inactive or retired accountants.

1. Any certified public accountant or licensed public accountant who is no longer practicing or employed because of disability or other retirement may notify the board of that status. In that event a certificate to practice as a certified public accountant or license to practice as a licensed public accountant shall be designated "inactive" and shall remain effective as such without payment of the annual registration fee required by North Dakota Century Code section 42-02.1-06 and this chapter. Such an inactive certificate or licenseholder may not practice as a certified public accountant or a licensed public accountant in this state.

2. An inactive certificate or licenseholder may apply for reinstatement to practice as a certified public accountant or licensed public accountant at any time and will be reinstated to "active" practice as a certified public accountant or licensed public accountant by paying the annual registration fee required for the year of application, and by satisfying the board that all current requirements for continuing education have been met.

History: Effective October 1, 1982.
General Authority: NDCC 43-02.1-02(6)(d)
Law Implemented: NDCC 43-02.1-06

3-02-02-06. Suspension or revocation of certified public accountant's certificate or licensed public accountant's license for nonpayment of registration fee.

1. The holder of a certificate to practice as a certified public accountant may have that certificate suspended or revoked for nonpayment of a registration fee. The holder of a license to practice as a licensed public accountant may have that license suspended or revoked for nonpayment of the registration fee. In the event the board notifies a holder of a certificate to practice as a certified public accountant or license to practice as a licensed public accountant that said fees are in default, and payment is not received by the board for a period of six months, the board shall proceed pursuant to North Dakota Century Code section 43-02.1-05 to suspend or revoke the certified public accountant's certificate or licensed public accountant's license.

2. Should a certificate or licenseholder fail to inform the board of a change of address, the board shall make reasonable efforts to obtain the address, but in the event that those efforts fail for a period of six months from the time when a certified public accountant's or licensed public accountant's registration fee is due, the board shall proceed to suspend or revoke the certified public accountant's certificate or licensed public accountant's license pursuant to North Dakota Century Code section 43-02.1-05.

History: Effective October 1, 1982.
General Authority: NDCC 43-02.1-02(6)(d)
Law Implemented: NDCC 43-02.1-06

3-04-01-06. Aiding unauthorized practice of public accounting. A certified public accountant or licensed public accountant shall not aid a noncertified public accountant or nonlicensed public accountant in the unauthorized practice of public accounting.

History: Effective October 1, 1982.
General Authority: NDCC 43-02.1-02(6)(e)
Law Implemented: NDCC 43-02.1-07

3-04-01-07. Dividing fees with noncertified public accountant or nonlicensed public accountant. A certified public accountant or licensed public accountant, or certified public accountant or licensed public accountant firm shall not share fees derived from the practice of

public accounting with a noncertified or nonlicensed person, except that:

1. An agreement by a certified public accountant or licensed public accountant with one's firm, partner, or associate may provide for the payment of money, over a reasonable period of time after the accountant's death to the accountant's estate or to one or more specified persons.

2. A certified public accountant or licensed public accountant or certified public accountant or licensed public accountant firm who undertakes to complete unfinished business of a deceased certified public accountant or licensed public accountant may pay to the estate of the deceased certified public accountant or licensed public accountant that portion of the total compensation which fairly represents the services rendered by the deceased certified public accountant or licensed public accountant.

3. A certified public accountant or licensed public accountant or certified public accountant or licensed public accountant firm may include nonlicensed employees in a retirement plan, even though the plan is based in whole or in part on a profit-sharing arrangement.

History: Effective October 1, 1982.
General Authority: NDCC 43-02.1-02(6)(e)
Law Implemented: NDCC 43-02.1-07

3-04-01-08. Avoiding influence by noncertified public accountants. A certified public accountant or licensed public accountant shall not practice with or in the form of a professional corporation or other entity if any of the entity's activities consist of the practice of public accounting, if:

1. A noncertified public accountant or nonlicensed public accountant owns any interest therein, except that a fiduciary representative of the estate of a certified public accountant or licensed public accountant may hold the stock or interest of the certified public accountant or licensed public accountant for a reasonable time during administration;

2. A noncertified public accountant or nonlicensed public accountant is a corporate director, or officer thereof; or

3. A noncertified public accountant or nonlicensed public accountant has the right to direct or control the professional judgment of the certified public accountant or licensed public accountant.

History: Effective October 1, 1982.
General Authority: NDCC 43-02.1-02(6)(3)

Law Implemented: NDCC 43-02.1-07

NOVEMBER 1982

3-04-01-01. Suspension. The state board of public accountancy derives its authority from North Dakota Century Code chapter 43-02.1, the Public Accountancy Act of 1975, which provides that the board may, after a hearing, suspend an accountant found guilty of violating any provisions of this code of ethics.

History: Amended effective November 1, 1982.
General Authority: NDCC 43-02.1-02(6)(d)
Law Implemented: NDCC 43-02.1-02(6)(e), 43-02.1-05(1)(d)

3-04-03-01. ~~COMPETENCE. An accountant shall not undertake any engagement that the accountant or the firm cannot reasonably expect to complete with professional competence.~~ General standards. An accountant shall comply with the following general standards as interpreted by the board and must justify any departures therefrom.

1. Professional competence. An accountant shall undertake only those engagements which the accountant or the accountant's firm can reasonably expect to complete with professional competence.

2. Due professional care. An accountant shall exercise due professional care in the performance of an engagement.

3. Planning and supervision. An accountant shall adequately plan and supervise an engagement.

4. Sufficient relevant data. An accountant shall obtain sufficient relevant data to afford a reasonable basis for conclusions or recommendations in relation to an engagement.

5. Forecasts. An accountant shall not permit the accountant's name to be used in conjunction with any forecast of future transactions in a manner which may lend to the belief that the member vouches for the achievability of the forecast.

History: Amended effective November 1, 1982.
General Authority: NDCC 43-02.1-02(6)(d)
Law Implemented: NDCC 43-02.1-02(6)(e)

3-04-03-02. Auditing standards. An accountant shall not permit the accountant's name to be associated with financial statements in such a manner as to imply that the accountant is acting as an independent public accountant unless the accountant has complied with the applicable generally accepted auditing standards promulgated by the institute. Statements on auditing procedure issued by the institute's auditing standards executive committee ~~on auditing procedure~~ are, for the purposes of this section, considered to be interpretations of the generally accepted auditing standards. Departures from such statements must be justified by those who do not follow them.

History: Amended effective November 1, 1982.
General Authority: NDCC 43-02.1-02(6)(d)
Law Implemented: NDCC 43-02.1-02(6)(e)

3-04-03-04. ~~FORECASTS.~~ ~~An accountant shall not permit the accountant's name to be used in conjunction with any forecast of future transactions in a manner that may lead to the belief that the accountant vouches for the achievability of the forecast.~~ Other technical standards. An accountant shall comply with other technical standards promulgated by bodies designated by the board to establish such standards, and departures therefrom must be justified by those who do not follow them.

History: Amended effective November 1, 1982.
General Authority: NDCC 43-02.1-02(6)(d)
Law Implemented: NDCC 43-02.1-02(6)(e)

CHAPTER 3-04-05
RESPONSIBILITIES TO COLLEAGUES

~~Section~~
~~3-04-05-01~~ ~~Encroachment~~

~~3-04-05-01. Encroachment.~~ ~~An accountant shall not endeavor to provide a person or entity with a professional service that is currently provided by another public accountant except:~~

1. An accountant may respond to a request for a proposal to render services and may furnish services to those who request it. However, if an audit client or another independent public accountant requests an accountant to provide professional advice on accounting or auditing matters in connection with an expression of opinion on financial statements, the accountant must first consult with the other accountant to ascertain that the accountant is aware of all the available relevant facts.

2. Where an accountant is required to express an opinion on combined or consolidated financial statements that include a subsidiary, branch, or other component audited by another independent public accountant, the accountant may insist on auditing any such component which, in the accountant's judgment, is necessary to warrant the expression of the accountant's opinion.

An accountant who receives an engagement for services by referral from another public accountant shall not accept the client's request to extend the accountant's services beyond the specific engagement without first notifying the referring accountant, nor shall the accountant seek to obtain any additional engagement from the client.

General Authority: NDCC 43-02.1-02(6)(d)
Law Implemented: NDCC 43-02.1-02(6)(e)

[Repealed effective November 1, 1982.]

TITLE 13

Banking and Financial Institutions, Department of

SEPTEMBER 1982

13-02-01-01. Time deposits of one hundred thousand dollars or more. ~~There is no maximum rate of interest per annum, payable by state banking associations, presently prescribed on any time deposit of one hundred thousand dollars or more.~~

General Authority: ~~NDCC 6-01-04~~
Law Implemented: ~~NDCC 6-03-02, 6-03-63~~

Repealed effective September 1, 1982.

13-02-01-02. Fixed ceiling time deposits of less than one hundred thousand dollars. ~~Except as provided in sections 13-02-01-01, 13-02-01-04, 13-02-01-05, 13-02-01-06, and 13-02-01-07, no state banking association shall pay interest per annum on any time deposit at a rate in excess of the applicable rate under the following schedule:~~

MATURITY	MAXIMUM PERCENT
~~30 days or more but less than 90 days~~	~~5 1/4~~
~~90 days or more but less than 1 year~~	~~5 3/4~~
~~1 year or more but less than 2 1/2 years~~	~~6~~
~~2 1/2 years or more but less than 4 years~~	~~6 1/2~~
~~4 years or more but less than 6 years~~	~~7 1/4~~
~~6 years or more but less~~	

~~than 8 years 7 1/2~~
~~8 years or more 7 3/4~~

~~History: Amended effective July 1, 1979; amended effective August 21, 1979; amended effective January 1, 1980.~~
General Authority: ~~NDCC~~ 6-01-04
Law Implemented: ~~NDCC~~ 6-03-02, 6-03-03

Repealed effective September 1, 1982.

13-02-01-03. ~~Savings deposits. No state banking association shall pay interest at a rate in excess of five and one-quarter percent on any savings deposit. Provided, however, that no state banking association shall pay interest at a rate in excess of five percent on any savings deposit that is subject to negotiable orders of withdrawal, the issuance of which is authorized by federal law.~~

~~History: Amended effective July 1, 1979.~~
General Authority: ~~NDCC~~ 6-01-04
Law Implemented: ~~NDCC~~ 6-03-02, 6-03-63

Repealed effective September 1, 1983.

13-02-01-04. ~~Governmental unit time deposits of less than one hundred thousand dollars. Except as provided in sections 13-02-01-01, 13-02-01-06, and 13-02-01-07, no state banking association shall pay interest on any time deposit which consists of funds deposited to the credit of, or in which the entire beneficial interest is held by, the United States, any state of the United States, or any county, municipality, or political subdivision thereof, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, Guam, or political subdivision thereof, at a rate in excess of eight percent.~~

~~History: Amended effective July 1, 1979.~~
General Authority: ~~NDCC~~ 6-01-04
Law Implemented: ~~NDCC~~ 6-03-02, 6-03-63

Repealed effective September 1, 1982.

13-02-01-05. Individual retirement account and keogh (H.R. 10) plan deposits of less than one hundred thousand dollars. ~~Except as provided in sections 13-02-01-01 and 13-02-01-07, a state banking association may pay interest on any time deposit with a maturity of one and one-half years or more that consists of funds deposited to the credit of, or in which the entire beneficial interest is held by, an individual pursuant to an Individual Retirement Account agreement or Keogh (H.R. 10) Plan established pursuant to 26 U.S.C. (I.R.C. 1954) sections 219, 401, 404, and 408, with no regulated interest rate ceiling.~~

History: ~~Amended effective July 1, 1979, amended effective March 1, 1982.~~
General Authority: ~~NDCC 6-01-04~~
Law Implemented: ~~NDCC 6-03-02, 6-03-63~~

Repealed effective September 1, 1982.

13-02-01-06. Twenty-six week money market time deposits of less than one hundred thousand dollars. ~~Except as provided in sections 13-02-01-01, 13-02-01-02, and 13-02-01-04, state banking associations may pay interest on any nonnegotiable time deposits of ten thousand dollars or more, with a maturity of twenty-six weeks, at a rate not to exceed the rate established (auction average on a discount basis) for United States treasury bills with maturities of twenty-six weeks issued on or immediately prior to the date of deposit. Rounding such rate to the next higher rate is not permitted. A state bank may not compound interest during the term of this deposit. A state bank may offer this category of time deposit to all depositors. However, a state bank may pay interest on any nonnegotiable time deposits of ten thousand dollars or more with a maturity of twenty-six weeks which consists of funds deposited to the credit of, or in which the entire beneficial interest is held by:~~

~~1. The United States, any state of the United States, or any county, municipality, or political subdivision thereof, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, Guam, or political subdivision thereof, or~~

~~2. An individual pursuant to an Individual Retirement Account agreement or Keogh (H.R. 10) Plan established pursuant to 26 U.S.C. (I.R.C. 1954) sections 401, 408,~~

at a rate not to exceed the ceiling rate payable on the same category of deposits by any federally insured savings and loan association or mutual savings bank.

History: Amended effective July 1, 1979, amended effective January 1, 1980, amended effective May 1, 1980.
General Authority: NDCC 6-01-04
Law Implemented: NDCC 6-03-02, 6-03-63

Repealed effective September 1, 1982.

13-02-01-07. Time deposits of less than one hundred thousand dollars with maturities of two and one-half years or more. Except as provided in sections 13-02-01-01, 13-02-01-02, 13-02-01-04, and 13-02-01-05, a state banking association may pay interest on any nonnegotiable time deposit with a maturity of two and one-half years or more that is issued on or after the first day of each month at a rate not to exceed the lower of three-quarters of one percent below the average two and one-half-year yield for United States treasury securities as determined and announced by the United States department of the treasury three business days prior to the first day of such month, or eleven and three-fourths percent. The average two and one-half-year yield will be rounded by the United States department of the treasury to the nearest five basis points. A state bank may offer this category of time deposit to all depositors. However, a state bank may pay interest on any nonnegotiable time deposit with a maturity of two and one-half years or more which consists of funds deposited to the credit of, or in which the entire beneficial interest is held by:

1. The United States, any state of the United States, or any county, municipality, or political subdivision thereof, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, Guam, or political subdivision thereof, or

2. An individual pursuant to an Individual Retirement Account agreement or Keogh (H.R. 10) Plan established pursuant to 26 U.S.C. (I.R.C. 1954) sections 401, 408,

at a rate not to exceed the ceiling rate payable on the same category of deposits by any federally insured savings and loan association or mutual savings bank.

History: ~~Effective July 1, 1979, amended effective January 1, 1980, amended effective May 1, 1980.~~
General Authority: ~~NDCC 6-01-04~~
Law Implemented: ~~NDCC 6-03-02, 6-03-63~~

Repealed effective September 1, 1982.

~~13-02-01-08. Interest adjustments. The state banking board hereby adopts the interest rate adjustments concerning money market certificates and small saver certificates which were promulgated by the depository institutions deregulation committee effective June 2, 1980. The board adopts the adjustments in the form found in Volume 45, No. 110 of the Federal Register dated June 5, 1980, cited as 12 CFR Part 1204. Any provision of North Dakota Administrative Code sections 13-02-01-06 and 13-02-01-07 in conflict with the provisions of 12 CFR Part 1204, shall be superseded by the provisions of 12 CFR Part 1204 to the extent of the conflict, and all provisions of sections 13-02-01-06 and 13-02-01-07 not in conflict, shall remain effective.~~

History: ~~Effective June 6, 1980, amended effective July 21, 1980.~~
General Authority: ~~NDCC 6-01-04~~
Law Implemented: ~~NDCC 6-03-02, 6-03-63~~

Repealed effective September 1, 1982.

~~13-02-01-09. Temporary authorization. The state banking board authorizes state banks to pay interest on deposits in accordance with any and all interest rate adjustments authorized by the depository institutions deregulation committee, and published in the federal register. The authority for state banks to pay such interest on deposits shall be effective from the date the depository institutions deregulation committee adjustments are effective until such time as the state banking board can consider the adjustments as proposed amendments to the North Dakota Administrative Code and act thereon. The secretary of the state banking board shall issue notice of proposed amendments, reflecting deregulation committee interest rate adjustments, as soon as information from that committee is made available to the secretary and shall set the date for consideration of the proposed amendments in accordance with this section. The state banking board shall consider the proposed amendments~~

~~at its next regular or special meeting, but in no event later than sixty days after proposal of the amendments. This temporary authorization to conform to the adjustments made by the depository institutions deregulation committee shall also not extend beyond sixty days.~~

History: ~~Effective July 21, 1980.~~
General Authority: ~~NDCC 6-01-04~~
Law Implemented: ~~NDCC 6-03-02, 6-03-63~~

Repealed effective September 1, 1982.

13-02-01-10. Deposits subject to negotiable orders of withdrawal. ~~No state banking association shall pay interest at a rate in excess of five and one-fourth percent per annum on any deposit or account subject to negotiable or transferable orders of withdrawal that is authorized pursuant to 12 U.S.C. 1832(a).~~

History: ~~Effective December 26, 1980.~~
General Authority: ~~NDCC 6-01-04~~
Law Implemented: ~~NDCC 6-03-02, 6-03-63~~

Repealed effective September 1, 1982.

13-02-01-11. Fourteen to ninety day time deposit of less than one hundred thousand dollars. ~~State banking associations may pay interest on any time deposit with an original maturity or notice period of fourteen days or more, but less than ninety days, at a rate not to exceed five and one-fourth percent.~~

History: ~~Effective December 26, 1980.~~
General Authority: ~~NDCC 6-01-04~~
Law Implemented: ~~NDCC 6-03-02, 6-03-63~~

Repealed effective September 1, 1982.

13-02-01-12. Tax-exempt savings certificates. ~~Except as provided in sections 13-02-01-01, 13-02-01-02, 13-02-01-04, 13-02-01-05, 13-02-01-06, 13-02-01-07, 13-02-01-10, and 13-02-01-11, state banking associations may pay interest on~~

~~a nonnegotiable tax-exempt savings certificate (ASC) provided that the time deposit has an original maturity of exactly one year, is available in denominations of five hundred dollars and any other denomination at the discretion of the banking association, and has an annual investment yield to maturity equal to seventy percent of the average annual investment yield on the most recent auction of fifty-two week United States treasury bills prior to the calendar week in which the tax-exempt savings certificate is issued. The certificates may be issued only from October 1, 1981, through December 31, 1982, and are to be issued in accordance with the Economic Recovery Tax Act of 1981 and provisions of 12 CFR Part 1204.116.~~

History: ~~Effective March 1, 1982.~~
General Authority: ~~NDCC 6-01-04~~
Law Implemented: ~~NDCC 6-03-02, 6-03-63~~

Repealed effective September 1, 1982.

13-02-01-13. Authorization. The state banking board authorizes state banks to pay interest on deposits in accordance with all interest rate authorizations adopted by the board of governors of the federal reserve system pursuant to the provisions of section 19 of the Federal Reserve Act, 12 CFR Part 217 (also known as regulation Q) and all interest rate adjustments authorized by the depository institutions deregulation committee pursuant to the provisions of the Depository Institutions Deregulation and Monetary Control Act of 1980, and published in the federal register.

The authority for state banks to pay such interest on deposits shall be the date the adjustments are effective unless the state banking board shall otherwise direct within ninety days of the state banking board receiving notification of proposed adjustments.

History: Effective September 1, 1982.
General Authority: NDCC 6-01-04
Law Implemented: NDCC 6-03-02, 6-03-63

TITLE 33

Health, Department of

33-07-02-08. Nursing unit.

1. Patient rooms. Each patient room shall meet the following requirements:

   a. Grade level. No patient room shall be located on a floor unless a portion of it is at or above grade level and no patient room shall have its floor more than thirty inches [76.2 centimeters] below the adjacent grade.

   b. Floor area.

      (1) Patient rooms shall have adequate space to conveniently house necessary furniture and equipment, to provide for efficient patient care and to provide for convenient movement of stretchers and for the transfer of patients to and from beds. Therefore, the least dimension of a rectangular multiple patient room shall not be less than eleven feet six inches [3.51 meters] free of fixed obstructions, except in especially arranged rectangular rooms, as, for example, in the toe-to-toe arrangement where the minimum clear width shall not be less than ten feet [3.05 meters] and the minimum clear length shall not be less than seventeen feet six inches [5.33 meters], free of fixed obstructions.

      (2) In single patient rooms the least dimension free of fixed obstructions shall not be less than ten feet [3.05 meters] and the floor area shall not be less than one hundred twenty-five square feet [11.61 square meters] nor more than one hundred forty-five square feet [13.47 square meters]. Area required for toilet room, closet, and alcoves shall be in addition

to the required one hundred twenty-five square feet [11.61 square meters] of floor area.

(3) In the case of other than rectangular shaped rooms, there shall be adherence to the principles of adequate minimum space allocation as reflected by the specified minimum dimensions in rectangular rooms and by the following minimum areas per bed.

(4) Patient rooms having two or more beds shall have as a minimum floor area, eighty square feet [7.43 square meters] of space free of fixed obstructions per bed. Area required for toilet room, closet, and alcove shall be in addition to the required eighty square feet [7.43 square meters] per bed of floor area.

(5) Multibed rooms shall be designed to permit no more than two beds side by side parallel to the window wall nor more than four beds per room.

(6) In pediatric units, rooms equipped with youth beds shall have one hundred square feet [9.29 square meters] in single rooms and eighty square feet [7.43 square meters] per bed in two or more bedrooms. In pediatric units, rooms equipped with cribs shall have forty square feet [3.72 square meters] per crib.

(7) Floor area shall determine bed capacity.

c. Window. Sill shall not be higher than three feet [.91 meters] above the floor and shall be above grade. Each patient's room shall be an outside room with a satisfactory amount of natural light. The area of the glazing material in the window shall be not less than one-tenth of the floor area of the room served by them. Windows in patient rooms need not be operable in hospitals designed with an engineered smoke controlled system in accordance with Standards for Installation of Air Conditioning and Ventilating Systems, NFPA 90A, 1978.

d. Nurses' calling stations.

e. Lavatory. In single and two-bed rooms, the lavatory may be located in a private toilet room.

f. Locker or closet for each patient.

g. Cubicle curtains, or equivalent built-in devices, for privacy for each patient in multibed rooms.

h. No patient room shall be located more than one hundred twenty feet [36.58 meters] from the nurses' station, the clean workroom, and the soiled workroom.

2. Service areas in each nursing unit. The size of each service area will depend on the number and types of beds within the unit and include:

   a. Nurses' station. For nurses' charting, doctor's charting, communications, and storage for supplies.

   b. Nurses' toilet room. Convenient to nurses' station.

   c. Nurses' office. Near nurses' station. (Office may serve more than one nursing unit.)

   d. Clean workroom. For storage and assembly of supplies for nursing procedures; shall contain work counter, storage cabinets, and sink. Provide adequate circulation space.

   e. Soiled workroom. Shall contain clinical sink, two compartment sink, work counter, two waste receptacles, and soiled linen receptacles. Provide adequate circulation space.

   f. Medicine room. Separate lockable room opening onto nurses' station; with sink, refrigerator, locked storage, and facilities for preparation and dispensing of medication.

   g. Clean linen storage. Enclosed storage space.

   h. Nourishment station. Storage, refrigerator, hot plate, self-dispensing icemaker, and sink.

   i. Equipment storage room. For storage of intravenous stands, inhalators, air mattresses, walkers, and similar bulky equipment.

   j. Patient baths. One shower stall or one bathtub for each fifteen beds not individually served.

   k. Stretcher and wheelchair parking area or alcove.

   l. Janitor's closet. Size and location to be determined by the design of the facility. Floor receptors shall be provided for each closet.

3. Patient toilet rooms. A toilet room shall be directly accessible from each patient room without going through the general corridor. One toilet room may serve two patient rooms but not more than four beds. (The lavatory may be omitted from the toilet room if one is provided in each patient room.)

   a. The minimum dimensions for any room containing only a water closet shall be three feet by six feet [.91 meters by 1.83 meters].

b. Water closets must be easily usable by wheelchair patients; grab bars shall be provided at all water closets.

c. Doors to toilet rooms shall have a minimum width of two feet ten inches [.86 meters] to admit a wheelchair.

d. At least one room shall be provided for toilet training; this shall be accessible from the nursing corridor and may serve the bathing area, and shall provide three foot [.91 meter] clearance at the front and sides of the water closet.

4. Isolation rooms. Isolation room or rooms for the particular use of those prone to infections as well as those suffering from infections shall be provided on the basis of one for each thirty beds or major fraction thereof, if the hospital does not have a separate contagious disease unit. Each isolation room shall have:

a. Only one patient per room.

b. Lavatory within patient room or toilet room.

c. View-window for nursing observation.

d. Separate toilet room with bath or shower.

e. An anteroom with adequate facilities to maintain aseptic conditions, including lavatory, space for gowns, a waste receptacle for soiled linen, and a waste receptacle for disposables. (One anteroom may serve several isolation rooms.)

5. Disturbed patient room. In the absence of a psychiatric unit, each hospital shall have a room which shall be designed in a manner to permit use as an ordinary patient room and which will also contain facilities to care for patients needing close supervision including facilities to prevent the patient's escape, suicide, or hiding. To minimize patient injury, the design of the room shall exclude sharp projections. An individual toilet room with lavatory shall be provided. The toilet room door shall be lockable only from the outside.

6. Coronary care of intensive care unit or units. The size of the unit shall be in keeping with the activity of the hospital.

a. Coronary care bed space shall have an outside window or windows.

b. Floor area, minimum for single rooms shall be one hundred twenty-five square feet [11.61 square meters], minimum dimension ten feet [3.05 meters].

c. In a multiple bed unit, there shall be a minimum of six feet [1.83 meters] of floor space between beds and at least three feet [.91 meters] of floor space between the wall and the bed and at least four feet [1.22 meters] at the foot of the bed.

d. Monitoring, resuscitation, and supportive equipment shall be available in keeping with the size of the unit.

e. The unit shall be self-sufficient, maintaining its own supply of equipment and drugs.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-07-02-18. Dietary department.

1. Equipment and facilities shall comply with the minimum standards set forth in the Food Service Sanitation Manual issued by the state department of health. Hospital Dietary Services, a planning guide (1966) issued by the department of health, education, and welfare, is to be used as a guide in planning the layout and selecting equipment. If a conventional food preparation system is used, the following facilities shall be provided.

   a. Food preparation center. ~~Provide windows.~~

   b. Food serving facilities.

   c. Dishwashing room.

   d. Potwashing facilities.

   e. Refrigerated storage, medium temperature and freezer units.

   f. Food storage.

   g. Sanitizing facilities and parking area for carts.

   h. Equipment storage areas.

   i. Waste disposal facilities.

   j. Canwashing facilities.

k. Dining facilities for patients and staff.

l. Office for dietary service supervisor and/or dietitian.

m. Janitor's closet. Storage for housekeeping supplies and equipment; floor receptor.

n. Lavatories. In food preparation room and dishwashing room, without mirrors.

o. Toilet rooms with lockers. Conveniently accessible for dietary staff but not opening directly onto dietary area.

p. Self-dispensing icemaking facilities.

2. If a convenience food system is used, dietary areas and equipment shall be designed to accommodate the requirements for sanitary storage, processing, and handling.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-01-04. Definitions. As used in this article, these terms have the definitions set forth below. Additional definitions used only in a certain section will be found in that section. Terms not defined in this article shall have the meaning given them in North Dakota Century Code chapter 23-20.1.

1. "Accelerator produced material" means any material made radioactive by exposing it in a particle accelerator.

2. "Act" means North Dakota Century Code chapter 23-20.1.

3. "Agreement state" means any state with which the United States nuclear regulatory commission has entered into an effective agreement under Section 274(b) of the Atomic Energy Act of 1954, as amended [73 Stat. 688; 42 U.S.C. 2021].

4. "Airborne radioactive material" means any radioactive material dispersed in the air in the form of dusts, fumes, mists, vapors, or gases.

5. "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 Appendix A, Table I, Column 1, chapter 33-10-04; 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 percent of the amounts specified in Appendix A, Table I, Column 1, chapter 33-10-04.

6. "Byproduct material" means ~~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.~~:

   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.

7. "Calendar quarter" means not less than twelve consecutive weeks nor more than fourteen consecutive weeks. The first calendar quarter of each year shall begin in January and subsequent calendar quarters shall be so arranged such that no day is included in more than one calendar quarter and no day in any one year is omitted from inclusion within a calendar quarter. No licensee or registrant shall change the method observed by the licensee or registrant of determining calendar quarters for purposes of this article except at the beginning of a calendar year.

8. "CFR" means Code of Federal Regulations.

9. "Curie" means a unit of measurement of radioactivity. One curie (Ci) is that quantity of radioactive material which decays at the rate of 3.7×10^{10} disintegrations per second (dps). Commonly used submultiples of the curie are the millicurie and the microcurie. One millicurie (mCi) = 0.001 curie = 3.7×10^{7} dps. One microcurie (uCi) = 0.000001 curie = 3.7×10^{4} dps.

~~9.~~ 10. "Department" means the North Dakota state department of health.

11. "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.

~~10.~~ 12. "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")

13. "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 years.

~~11.~~ 14. "Exposure" means the quotient of dQ by dm where "dQ" is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons 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).)

~~12.~~ 15. "Exposure rate" means the exposure per unit of time, such as R/min, mR/h, etc.

~~13.~~ 16. "Healing arts" means diagnostic or healing treatment of human and animal maladies including, but not limited to, the following which are duly licensed by the state of North Dakota for the lawful practice of: medicine and its associated specialties, dentistry, veterinary medicine, osteopathy, chiropractic, and podiatry.

~~14.~~ 17. "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 hour a dose in excess of one hundred millirems.

~~15.~~ 18. "Human use" means the internal or external administration of radiation or radioactive material to human beings.

~~16.~~ 19. "Individual" means any human being.

~~17.~~ 20. "Inspection" means an official examination or observation including, but not limited to, tests, surveys, and monitoring to determine compliance with rules, regulations, orders, requirements, and conditions of the department.

~~18.~~ 21. "License" means a general or specific license issued by the department in accordance with the regulations adopted by the department.

~~19.~~ 22. "Licensee" means any person who possesses a specific license of the department in accordance with this article and North Dakota Century Code chapter 23-20.1.

23. "Licensing state" means any state with regulations equivalent to the Suggested State Regulations for Control of Radiation relating to, and an effective program for, the regulatory control of NARM.

24. "NARM" means any naturally occurring or accelerator-produced radioactive material except source material.

~~20.~~ 25. "Natural radioactivity" means radioactivity of naturally occurring nuclides.

~~21.~~ 26. "Occupational dose" means exposure of an individual to radiation (a) in a restricted 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 diagnosis or therapy of such individual.

27. "Ore refineries" means all processors of a radioactive material ore.

~~22.~~ 28. "Particle accelerator" means any machine capable of accelerating electrons, protons, deuterons, 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 megaelectronvolt.

~~23.~~ 29. "Person" means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this state, any other state or political subdivision or agency thereof, and any legal successor, representative, agent, or agency of the foregoing, other than the commission, or any successor thereto and other than federal government agencies licensed by the commission or any successor thereto.

~~24.~~ 30. "Personnel monitoring equipment" means devices, e.g., film badges, pocket dosimeters, and thermoluminescent dosimeters, designed to be worn or carried by an individual for the purpose of estimating the dose received by the individual.

~~25.~~ 31. "Pharmacist" means an individual licensed by this state to compound and dispense drugs, prescriptions, and poisons.

~~26.~~ 32. "Physician" means an individual licensed by this state to dispense drugs in the practice of medicine.

~~27.~~ 33. "Rad" means the special unit of absorbed dose. One rad equals one hundredth of a joule per kilogram of material; for

example, if tissue is the material of interest, then one rad equals one hundred ergs per gram of tissue.

~~28.~~ 34. "Radiation" means ionizing radiation, i.e., gamma rays and X-rays, alpha and beta particles, high speed electrons, neutrons, and other nuclear particles.

~~29.~~ 35. "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 hour a dose in excess of five millirems, or in any five consecutive days a dose in excess of one hundred millirems.

~~30.~~ 36. "Radiation machine" means any device capable of producing radiation except those which produce radiation only from radioactive material.

~~31.~~ 37. "Radiation safety officer" means one who has the knowledge and responsibility to apply appropriate radiation protection regulations.

~~32.~~ 38. "Radioactive material" means any material (solid, liquid, or gas) which emits radiation spontaneously.

~~33.~~ 39. "Radioactivity" means the disintegration of unstable atomic nuclei by the emission of radiation.

~~34.~~ 40. "Registrant" means any person who is registered with the department and is legally obligated to register with the department pursuant to this article and North Dakota Century Code chapter 23-20.1.

~~35.~~ 41. "Registration" means the notification of the department of possession of a source of radiation and the furnishing of information with respect thereto, in accordance with North Dakota Century Code chapter 23-20.

~~36.~~ 42. "Regulations of the United States department of transportation" means the regulations in 49 ~~C.F.R. parts 170-189, 14 C.F.R. part 103, and 46 C.F.R. part 146~~ 49 CFR, parts 100-189.

~~37.~~ 43. "Rem" means a measure of the dose of any radiation to body tissue in terms of its estimated biological effect relative to a dose received from an exposure to one roentgen (R) of X-rays. (one millirem (mrem) = 0.001 rem.) For the purpose of this article, any of the following is considered to be equivalent to a dose of one rem:

a. An exposure of 1 R of x, or gamma radiation.

b. A dose of 1 rad due to x, gamma, or beta radiation.

c. A dose of 0.05 rad due to particles heavier than protons and with sufficient energy to reach the lens of the eye.

d. A dose of 0.1 rad due to neutrons or high energy protons. If it is more convenient to measure the neutron flux, or equivalent, than to determine the neutron absorbed dose in rads, one rem of neutron radiation may, for purposes of this article, be assumed to be equivalent to fourteen 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 rem may be estimated from the following table:

Neutron Flux Dose Equivalents

Neutron energy (MeV)	Number of neutrons per square centimeter for a dose equivalent of 1 rem (neutrons/cm^2)	Average flux density to deliver 100 millirems in 40 hours (neutrons/cm^2 per second)
Thermal	970×10^6	670
0.0001	720×10^6	500
0.005	820×10^6	570
0.02	400×10^6	280
0.1	120×10^6	80
0.5	43×10^6	30
1.0	26×10^6	18
2.5	29×10^6	20
5.0	26×10^6	18
7.5	24×10^6	17
10.0	24×10^6	17
10 to 30	14×10^6	10

~~38.~~ 44. "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.

~~39.~~ 45. "Restricted area" (controlled area) 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 material. "Restricted area" does not include any areas used for residential quarters, although a separate room or rooms in a residential building may be set apart as a restricted area.

~~40.~~ 46. "Roentgen" (R) means the special unit of exposure. One roentgen equals 2.58×10^{-4} coulombs per kilogram of air. (See "exposure")

~~41.~~ 47. "Sealed source" means radioactive material that is permanently bonded or fixed in a capsule or matrix designed to prevent release and dispersal of the radioactive material under the most severe conditions which are likely to be encountered in normal use and handling.

~~42.~~ 48. "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 of one percent (0.05 percent) or more of (1) uranium, (2) thorium, or (3) any combination thereof. Source material does not include special nuclear material.

49. "Source material milling" means any activity that results in the production of byproduct material as defined in subdivision b of subsection 6.

~~43.~~ 50. "Source of radiation" means any radioactive material, or any device or equipment emitting or capable of producing radiation.

~~44.~~ 51. "Special form" means 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 millimeter or at least one dimension greater than five millimeters; does not melt, sublime, or ignite in air at a temperature of one thousand degrees Fahrenheit [540.00 degrees Celsius]; will not shatter or crumble if subjected to the percussion test described in Appendix B to this chapter; and is not dissolved or converted into dispersible form to the extent of more than five-thousandths percent by weight by immersion for one week in water at sixty-eight degrees Fahrenheit [20 degrees Celsius] or in air at eighty-six degrees Fahrenheit [30 degrees Celsius]; or

b. The material is securely contained in a capsule having no dimension less than five-tenths millimeter or at least one dimension greater than five millimeters, which will retain its contents if subjected to the tests prescribed in Appendix B to this chapter; and which is constructed of materials which do not melt, sublime, or ignite in air at one thousand four hundred seventy-five degrees Fahrenheit [807.22 degrees Celsius], and do not dissolve or convert into dispersible form to the extent of more than five-thousandths percent by weight by immersion for one week in water at sixty-eight degrees Fahrenheit [20 degrees

Celsius] or in air at eighty-six degrees Fahrenheit [30 degrees Celsius].

~~45.~~ 52. "Special nuclear material in quantities not sufficient to form a critical mass" means uranium enriched in the isotope U-235 in quantities not exceeding three hundred fifty grams of contained U-235, uranium-233 in quantities not exceeding two hundred grams; plutonium in quantities not exceeding two hundred 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 "1", i.e., unity. For example, the following quantities in combination would not exceed the limitation and are within the formula:

$$\frac{175 \text{ (grams contained U-235)}}{350} + \frac{50 \text{ (grams U-233)}}{200} + \frac{50 \text{ (grams Pu)}}{200} = 1$$

~~46.~~ 53. "Survey" means an evaluation of the production, use, release, disposal, or presence of sources of radiation under a specific set of conditions to determine actual or potential radiation hazards. When appropriate, such evaluation includes, but is not limited to tests, physical examination, and measurements of levels of radiation or concentration of radioactive material present.

~~47.~~ 54. "Test" means a method for determining the characteristics or condition of sources of radiation or components thereof.

~~48.~~ 55. "These regulations" means all parts of this article and any subsequent changes or additions thereto.

~~49.~~ 56. "Transport group" means any one of seven groups into which radionuclides in normal form are classified, according to their toxicity and their relative potential hazard in transport, in Appendix A to this chapter.

a. Any radionuclide not specifically listed in one of the groups in Appendix A shall be assigned to one of the groups in accordance with the following table:

Radionuclide	Radioactive Half-Life		
	0 to 1000 days	1000 days to 10^6 years	Over 10^6 years
Atomic number 1-81	Group III	Group II	Group III
Atomic number 82 and over	Group I	Group I	Group III

b. For mixtures of radionuclides the following shall apply:

(1) If the identity and respective activity of each radionuclide are known, the permissible 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 permissible activity for each group will not be greater than unity.

(2) 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.

(3) 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.

(4) 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.

57. "United States department of energy" means the department of energy established by Public Law No. 95-91 [91 Stat. 565; 42 U.S.C. 7101 et seq.] to the extent that the department exercises functions formerly vested in the United States atomic energy commission, its chairman, members, officers, and components and transferred to the United States energy

research and development administration and to the administrators thereof pursuant to sections 104(b), (c), and (d) of the Energy Reorganization Act of 1974 [Pub. L. 93-438; 88 Stat. 1237, effective January 19, 1975] and transferred to the secretary of energy pursuant to subsection 301(a) of the Department of Energy Organization Act [Pub. L. 95-91; 91 Stat. 577-573; 42 U.S.C. 7151, effective October 1, 1977].

~~50.~~ 58. "Unrefined and unprocessed ore" means ore in its natural form prior to any processing, such as grinding, roasting, beneficiating, or refining.

~~51.~~ 59. "Unrestricted area" (uncontrolled area) 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, and any area used for residential quarters.

60. "Waste handling licensees" means persons licensed to receive and store radioactive wastes prior to disposal and/or persons licensed to dispose of radioactive waste.

~~52.~~ 61. "Worker" means an individual engaged in work under a license or registration issued by the department and controlled by a licensee or registrant, but does not include the licensee or registrant.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-01-05. Exemptions.

1. General provision. The department may, upon application therefore or upon its own initiative, grant such exemptions or exceptions from the requirements of this article as it determines are authorized by law and will not result in undue hazard to public health and safety or property.

~~2. Carriers. Common and contract carriers, freight forwarders, and warehousemen, who are subject to the rules and regulations of the United States department of transportation or the United States postal service (39 C.F.R. parts 14 & 15), are exempt from this article to the extent that they transport or store sources of radiation in the regular course of their carriage for another or storage incident thereto. Private carriers who are subject to the rules and regulations of the United States department of transportation are exempted from this article to the extent that they transport sources of radiation. Common, contract, and~~

~~private carriers who are not subject to the rules and regulations of the United States department of transportation or the United States postal service are subject to applicable sections of this article.~~

~~3. United States energy research and development administration contractors and United States nuclear regulatory commission contractors. Any United States energy research and development administration contractor or subcontractor and any United States nuclear regulatory commission contractor or subcontractor of the following categories operating within this state is exempt from this article to the extent that such contractor or subcontractor under the contractor's or subcontractor's contract receives, possesses, uses, transfers, or acquires sources of radiation:~~

2. United States department of energy contractors and United States nuclear regulatory commission contractors. Any United States department of energy contractor or subcontractor and any United States nuclear regulatory commission contractor or subcontractor of the following categories operating within this state is exempt from this article to the extent that such contractor or subcontractor under the contractor's or subcontractor's contract receives, possesses, uses, transfers, or acquires sources of radiation:

a. Prime contractors performing work for the United States department of energy 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 United States department of energy performing research in, or development, manufacture, storage, testing, or transportation of, atomic weapons or components thereof.

c. Prime contractors of the United States department of energy using or operating nuclear reactors or other nuclear devices in a United States government-owned vehicle or vessel.

d. Any other prime contractor or subcontractor of the United States department of energy or the nuclear regulatory commission when the state and the 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 contractor or subcontractor is authorized by law.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

APPENDIX A
TRANSPORT GROUPING OF RADIONUCLIDES

Element *	Radionuclide **	Group
Actinium(89)	Ac-~~277~~ 227	I
	Ac-228	I
Americium(95)	Am-241	I
	Am-243	I
Antimony(51)	Sb-122	IV
	Sb-124	III
	Sb-125	III
Argon(18)	Ar-37	VI
	Ar-41	II
	Ar-41(uncompressed) ***	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-115 + M	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-134 + M	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-58 + M	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-152 + M	IV
	Eu-152	III
	Eu-154	II
	Eu-155	IV
Flourine(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
Holmiun(67)	Ho-166	IV
Hydrogen(1)	H-3(see tritium)	
Indium(49)	In-113 + M	IV
	In-114 + M	III
	In-115 + M	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-85 + M	III
	Kr-85 + M (uncompressed) ***	V
	Kr-85	III
	Kr-85(uncompressed) ***	VI
	Kr-87	II
	Kr-87(uncompressed) ***	V
Lanthanum(57)	La-140	IV
Lead(~~32~~ 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-197 + M	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-93 + M	IV
	Nb-95	IV
	Nb-97	IV
Osmium(76)	Os-185	IV
	Os-191 + M	IV
	Os-191	IV
	Os-193	IV
Palladium(46)	Pd-103	~~V~~ IV
	Pd-109	IV
Phosphorus(15)	P-32	IV
Platinum(78)	Pt-191	IV
	Pt-193	IV
	Pt-193 + M	IV
	Pt-197	IV

	Pt-197 + M	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-103 + M	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-110 + M	III
	Ag-111	IV
Sodium(11)	Na-22	III
	Na-24	IV
Strontium(38)	Sr-85 + M	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-96 + M	IV
	Tc-96	IV
	Tc-97 + M	IV
	Tc-97	IV
	Tc-99 + M	IV
	Tc-99	IV
Tellurium(52)	Te-125 + M	IV
	Te-127 + M	IV
	Te-127	IV
	Te-129	III
	Te-129 + M	III
	Te-129	IV
	Te-131 + M	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-117 + M	III
	Sn-121	III
	Sn-125	IV
Tritium(1)	H-3	IV
	H-3 (as a gas, as luminous paint, 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-131 + M	III
	Xe-131 + M (uncompressed) ***	V
	Xe-133	III
	Xe-133 (uncompressed) ***	VI
	Xe-135	II
	Xe-135 (uncompressed) ***	V
Ytterbium(70)	Yb-175	IV
Yttrium(39)	Y-88	III
	Y-90	IV
	Y-91m	III
	Y-91	III
	Y-92	IV
	Y-93	IV
Zinc(30)	Zn-65	IV
	Zn-69 + M	IV
	Zn-69	IV
Zirconium(40)	Zr-93	IV
	Zr-95	III
	Zr-97	IV

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* Atomic number shown in parentheses.
** Atomic mass number shown after the element symbol.
*** Uncompressed means at a pressure not exceeding one atmosphere.
+ M Metastable state.
++ (F) Fissile material.

History: Amended effective October 1, 1982.

33-10-02-11. Out-of-state radiation machines.

1. a. Whenever any radiation machine is to be brought into the state, for any temporary use, the person proposing to bring such machine into the state shall give written notice to the department at least five days before such machine is to be used in the state. The notice shall include the type of radiation machine; the nature, duration, and scope of use; and the exact location where the radiation machine is to be used.

   b. If, for a specific case, the five-day notification period would impose an undue hardship on the person, upon application to the department, permission to proceed sooner may be granted.

2. In addition, the out-of-state person shall do all of the following:

   a. Comply with all of this article.

b. Supply the department with such other information as the department may reasonably request.

c. Not operate within the state on a temporary basis, in excess of one hundred eighty calendar days per year.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-03-02. Exemptions.

1. Source material.

   a. Any person is exempt from this chapter to the extent that such person receives, possesses, uses, owns, or transfers source material in any chemical mixture, compound, solution, or alloy in which the source material is by weight less than one-twentieth of one percent of the mixture, compound, solution, or alloy.

   b. Any person is exempt from this chapter 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 process such ore.

   c. Any person is exempt from this chapter to the extent that such person receives, possesses, uses, or transfers:

      (1) Any quantities of thorium contained in:

         (a) Incandescent gas mantles.

         (b) Vacuum tubes.

         (c) Welding rods.

         (d) Electric lamps for illuminating purposes provided that each lamp does not contain more than fifty milligrams of thorium.

         (e) Germicidal lamps, sunlamps, and lamps for outdoor or industrial lighting provided that each lamp does not contain more than two grams of thorium.

         (f) Rare earth metals and compounds, mixtures, and products containing not more than one-fourth of one percent by weight thorium, uranium, or any combination of these.

(g) Personnel neutron dosimeters, provided that each dosimeter does not contain more than fifty milligrams of thorium.

(2) Source material contained in the following products:

(a) Glazed ceramic tableware, provided that the glaze contains not more than twenty percent by weight source material.

(b) Glassware, glass enamel, and glass enamel frit containing not more than ten percent by weight source material, but not including commercially manufactured glass brick, pane glass, ceramic tile, or other glass enamel or ceramic used in construction.

(c) Piezoelectric ceramic containing not more than two percent by weight source material.

(3) Photographic film, negatives, and prints containing uranium or thorium.

(4) Any finished product or part fabricated of, or containing, tungsten-thorium or magnesium-thorium alloys, provided that the thorium content of the alloy does not exceed four 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.

(5) 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 all of the following are met:

(a) The counterweights are manufactured in accordance with a specific license issued by ~~the department,~~ the United States nuclear regulatory commission~~, or any agreement state~~ authorizing distribution by the licensee pursuant to ~~this paragraph or equivalent regulations of the nuclear regulatory commission or any agreement state~~ 10 CFR part 40.

(b) Each counterweight has been impressed with the following legend clearly legible through any plating or other covering: "DEPLETED URANIUM". This requirement need not be met by counterweights manufactured prior to December

31, 1969; provided, that such counterweights are impressed with the legend, "CAUTION - RADIOACTIVE MATERIAL - URANIUM".

(c) Each counterweight is durably and legibly labeled or marked with the identification of the manufacturer and the statement: "UNAUTHORIZED ALTERATIONS PROHIBITED". This requirement need not be met by counterweights manufactured prior to December 31, 1969; provided, that such counterweights are impressed with the legend, "CAUTION - RADIOACTIVE MATERIAL - URANIUM".

(d) The exemption contained in this paragraph shall not be deemed to authorize the chemical, physical, or metallurgical treatment or processing of any such counterweights other than repair or restoration of any plating or other covering.

(6) 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 in ~~section 178.250, specification 55, part 178, of the regulations published by the United States department of transportation (49 C.F.R. 178.250)~~ 49 CFR 173.394 or 173.395 of United States department of transportation regulations.

(7) Thorium contained in finished optical lenses, provided that each lens does not contain more than thirty percent by weight of thorium, and that the exemption contained in this paragraph shall not be deemed to authorize either:

(a) 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

(b) The receipt, possession, use, or transfer of thorium contained in contact lenses, or in spectacles, or in eyepieces in binoculars or other optical instruments.

(8) Uranium contained in detector heads for use in fire detection units, provided that each detector head contains not more the five-thousandths microcurie of uranium~~; or~~.

(9) Thorium contained in any finished aircraft engine part containing nickel-thoria alloy, provided that all of the following are met:

(a) The thorium is dispersed in the nickel-thoria alloy in the form of finely divided thoria (thorium dioxide).

(b) The thorium content in the nickel-thoria alloy does not exceed four percent by weight.

d. The exemptions in subdivision c do not authorize the manufacture of any of the products described.

2. Radioactive material other than source material.

a. Exempt concentrations.

(1) Except as provided in paragraph 2, any person is exempt from this chapter 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 Schedule A of this chapter.

(2) 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 1 or equivalent regulations of the United States nuclear regulatory commission or any agreement state, except in accordance with a specific license issued pursuant to subdivision a of subsection 5 of section 33-10-03-05 or the general license provided in subsection 1 of section 33-10-03-06.

b. Exempt quantities.

(1) Except as provided in paragraphs 2 and 3, any person is exempt from this chapter 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 Schedule B of this chapter.

(2) This subdivision does 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.

(3) No person may, for purposes of commercial distribution, transfer radioactive material in the individual quantities set forth in Schedule B, knowing or having reason to believe that such quantities of radioactive material will be transferred to persons exempt under this subdivision or equivalent regulations of the United States nuclear regulatory commission ~~or~~, any agreement state, or a licensing state, except in accordance with a specific license issued by the United States nuclear regulatory commission pursuant to 10 CFR 32.18 or by the department pursuant to subdivision b of subsection 5 of section ~~33-106 0036 005~~ 33-10-03-05 which license states that the radioactive material may be transferred by the licensee to persons exempt under this subdivision or the equivalent regulations of the United States nuclear regulatory commission ~~or~~, any agreement state, or a licensing state.

c. Exempt items.

(1) 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 this chapter to the extent that the person receives, possesses, uses, transfers, owns, or acquires the following products. (Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or byproduct material whose subsequent possession, use, transfer, and disposal by all other persons are exempted from regulatory requirements may be obtained only from the United States nuclear regulatory commission, Washington, D.C. 20555):

(a) Timepieces or hands or dials containing not more than the following specified quantities of byproduct material and not exceeding the following specified levels of radiation:

[1] Twenty-five millicuries of tritium per timepiece.

[2] Five millicuries of tritium per hand.

[3] Fifteen millicuries of tritium per dial (bezels when used shall be considered as part of the dial).

[4] One hundred microcuries of promethium-147 per watch or two hundred microcuries of promethium-147 per any other timepiece.

[5] Twenty microcuries of promethium-147 per watch hand or forty microcuries of promethium-147 per other timepiece hand.

[6] Sixty microcuries of promethium-147 per watch dial or one hundred twenty microcuries of promethium-147 per other timepiece dial (bezels when used shall be considered as part of the dial).

[7] The levels of radiation from hands and dials containing promethium-147 will not exceed, when measured through fifty milligrams per square centimeter of absorber:

[a] For wristwatches, one-tenth millirad per hour at ten centimeters from any surface.

[b] For pocket watches, one-tenth millirad per hour at one centimeter from any surface.

[c] For any other timepiece, two-tenths millirad per hour at ten centimeters from any surface.

[8] One microcurie of radium 226 per timepiece in timepieces acquired prior to the effective date of these regulations.

(b) Lock illuminators containing not more than fifteen millicuries of tritium or not more than two millicuries of promethium-147 installed in automobile locks. The levels of radiation from each lock illuminator containing promethium-147 will not exceed one millirad per hour at one centimeter from any surface when measured through fifty milligrams per square centimeter of absorber.

(c) Balances of precision containing not more than one millicurie of tritium per balance or not more than five-tenths millicurie of tritium per balance part.

(d) Automobile shift quadrants containing not more than twenty-five millicuries of tritium.

(e) Marine compasses containing not more than seven hundred fifty millicuries of tritium gas and other marine navigational instruments containing not more than two hundred fifty millicuries of tritium gas.

(f) Thermostat dials and pointers containing not more than twenty-five millicuries of tritium per thermostat.

(g) Electron tubes; provided, that each tube does not contain more than one of the following specified quantities of byproduct material:

[1] One hundred fifty millicuries of tritium per microwave receiver protector tube or ten millicuries of tritium per any other electron tube.

[2] One microcurie of cobalt-60.

[3] Five microcuries of nickel-63.

[4] Thirty microcuries of krypton-85.

[5] Five microcuries of cesium-137.

[6] Thirty microcuries of promethium-147.

And provided further, that the levels of radiation from each electron tube containing byproduct material do not exceed one millirad per hour at one centimeter from any surface when measured through seven 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, pickup 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, ~~a source of byproduct material not exceeding the applicable quantity set forth in Schedule B of this chapter~~ one or more sources of byproduct material; provided, that:

[1] Each source contains no more than one exempt quantity set forth in Schedule B of this chapter; and

[2] Each instrument contains no more than ten exempt quantities. For purposes of this subparagraph an instrument's source may contain either one type or different types of radionuclides and an individual exempt quantity may be composed of fractional parts of one or more of the exempt quantities in Schedule B of this chapter, provided that the sum of such fractions shall not exceed unity.

(i) Spark gap irradiators containing not more than one microcurie of cobalt-60 per spark gap irradiator for use in electrically ignited fuel oil burners having a firing rate of at least three gallons [11.4 liters] per hour.

(2) Self-luminous products containing ~~tritium, krypton-85, or promethium-147~~ radioactive material.

(a) Except for persons who manufacture, process, or produce self-luminous products containing tritium, krypton-85, or promethium-147, any person is exempt from this chapter 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 United States nuclear regulatory commission pursuant to 10 CFR 32.22, which license authorizes the transfer of the product to persons who are exempt from regulatory requirements. The exemptions in this paragraph do 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 this article to the extent that such person receives, possesses, uses, transfers, or owns articles containing less than one-tenth microcurie of radium-226 which were acquired prior to the effective date of this article.

(3) Gas and aerosol detectors containing radioactive material.

(a) Except for persons who manufacture, process, or produce gas and aerosol detectors containing radioactive material, any person is exempt from this chapter 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 that detectors containing radioactive material shall have been manufactured, imported, or transferred in accordance with a specific license issued by the United States nuclear regulatory commission or ~~an agreement state~~ a licensing state, pursuant to 10 CFR 32.26, or equivalent, which authorizes the transfer of the detectors to persons who are exempt from regulatory requirements. (Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or byproduct material whose subsequent possession, use, transfer, and disposal by all other persons are exempted from regulatory requirements may be obtained only from the United States nuclear regulatory commission, Washington, D.C. 20555.)

(b) Gas and aerosol detectors previously manufactured and distributed to general licensees in accordance with a specific license issued by an agreement state shall be considered exempt under subparagraph a, provided that the device is labeled in accordance with the specific license authorizing distribution of the general licensed device, and provided further that they meet the requirements of subdivision c of subsection 5 of section 33-10-03-05.

(4) Resins containing scandium-46 and designed for sand consolidation in oil wells. Any person is exempt from this chapter 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 United States nuclear regulatory commission, or shall have been manufactured in accordance with the specifications contained in a specific license issued by the department or any agreement state to the manufacturer of such resins pursuant to licensing requirements equivalent to those in 10 CFR 32.16 and 32.17 of the regulations of the United States nuclear regulatory

commission. This exemption does not authorize the manufacture of any resins containing scandium-46.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-03-04. General licenses.

1. General licenses - source material.

~~a. A general license is hereby issued authorizing use and transfer of not more than fifteen pounds (6.8 kilograms) of source material at any one time by persons in the following categories.~~

~~(1) Pharmacists using the source material solely for the compounding of medicinals.~~

~~(2) Physicians using the source material for medicinal purposes.~~

~~(3) Persons receiving possession of source material from pharmacists and physicians in the form of medicinals or drugs.~~

~~(4) Commercial and industrial firms, and research, educational, and medical institutions for research, development, educational, or commercial purposes.~~

a. A general license is hereby issued authorizing commercial and industrial firms, research, educational and medical institutions, state and local government agencies to use and transfer not more than fifteen pounds [6.80 kilograms] of source material at any one time for research, development, educational, commercial, or operational purposes. A person authorized to use or transfer source material, pursuant to this general license, may not receive more than a total of one hundred fifty pounds [68.04 kilograms] of source material in any one calendar year.

b. Persons who receive, possess, use, or transfer source material pursuant to the general license issued in subdivision a shall not receive more than a total of one hundred fifty pounds [68.04 kilograms] of source material in any one calendar year.

c. Persons who receive, possess, use, or transfer source material pursuant to the general license issued in subdivision a are exempt from the provisions of chapters

33-10-04 and 33-10-10 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 such person who is also in possession of source material under a specific license issued pursuant to this chapter.

d. A general license is hereby issued authorizing the receipt of title to source material without regard to quantity. This general license does not authorize any person to receive, possess, use, or transfer source material.

e. (1) A general license is hereby issued to receive, acquire, possess, use, or transfer, in accordance with paragraphs 2, 3, 4, and 5, of depleted uranium contained in industrial products or devices for the purpose of providing a concentrated mass in a small volume of a product or device.

(2) The general license in paragraph 1 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 or in accordance with a specific license issued to the manufacturer by the United States nuclear regulatory commission or an agreement state which authorizes manufacturer of the products or devices for distribution to persons generally licensed by the United States nuclear regulatory commission or an agreement state.

(3) (a) Persons who receive, acquire, possess, or use depleted uranium pursuant to the general license established by paragraph 1 shall file form RAD 811 "registration certificate - use of depleted uranium under general license" with the department. The form shall be submitted within thirty days after the first receipt or acquisition of such depleted uranium. The registrant shall furnish the following information and such other information as may be required by that form:

[1] Name and address of the registrant.

[2] A statement that the registrant has developed and will maintain procedures designed to establish physical control over the depleted uranium described in paragraph 1 and designed to prevent transfer of such depleted uranium in any form, including metal scrap, to persons not authorized to receive the depleted uranium.

[3] Name and title, address, and telephone number of the individual duly authorized to act for and on behalf of the registrant in supervising the procedures identified in paragraph 1.

(b) The registrant possessing or using depleted uranium under the general license established by paragraph 1 shall report in writing to the department any changes in information furnished by the registrant in form RAD 811 "registration certificate - use of depleted uranium under general license". The report shall be submitted within thirty days after the effective date of such change.

(4) A person who receives, acquires, possesses, or uses depleted uranium pursuant to the general license established by paragraph 1:

(a) May 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.

(b) May not abandon such depleted uranium.

(c) Shall transfer or dispose of such depleted uranium only by transfer in accordance with subsection 14 of section 33-10-03-05. In the case where the transferee receives the depleted uranium pursuant to the general license established by paragraph 1, the transferor shall furnish the transferee a copy of this regulation and a copy of form RAD 811. In the case where the transferee receives the depleted uranium pursuant to a general license contained in the United States nuclear regulatory commission's or agreement state's regulation equivalent to paragraph 1, the transferor shall furnish the transferee a copy of this regulation and a copy of form RAD 811 accompanied by a note explaining that use of the product or device is regulated by the United States nuclear regulatory commission or agreement state under requirements substantially the same as those in this regulation.

(d) Within thirty days of any transfer, shall report in writing to the department the name and

address of the person receiving the depleted uranium pursuant to such transfer.

(e) May not export such depleted uranium except in accordance with a license issued by the United States nuclear regulatory commission pursuant to 10 CFR part 110.

(5) Any person receiving, acquiring, possessing, using, or transferring depleted uranium pursuant to the general license established by paragraph 1 is exempt from the requirements of chapter 33-10-04 and chapter 33-10-10 and these with respect to the depleted uranium covered by that general license.

2. General licenses - radioactive material other than source material.

a. Certain devices and equipment. A general license is hereby issued to transfer, receive, acquire, own, possess, and use radioactive material incorporated in the following devices or equipment which have been manufactured, tested and labeled by the manufacturer in accordance with a specific license issued to the manufacturer pursuant to subdivision f of subsection 5 of section 33-10-03-05 or its equivalent by the department, the United States nuclear regulatory commission, ~~of~~ any agreement state, or a licensing state, and authorizing distribution under this general license or its equivalent. This general license is subject to the provisions of sections 33-10-01-06 through 33-10-01-11, paragraph 2 of subdivision a of subsection 2 of section 33-10-03-02, subsections 7, 14, and 15 of section 33-10-03-05, section 33-10-03-07, and chapters 33-10-04 and 33-10-10. (Attention is directed particularly to the provisions of chapter 33-10-04 which relate to the labeling of containers.)

(1) 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 five hundred microcuries of polonium-210 per device.

(2) Ion generating tube. Devices designed for ionization of air which contain, as a sealed source or sources, radioactive material consisting of a total of not more than five hundred microcuries of polonium-210 per device or a total of not more than fifty millicuries of hydrogen-3 (tritium) per device.

b. Certain measuring, gauging, and controlling devices.

(1) 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 paragraphs 1, 2, and 3 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.

(2) The general license in paragraph 1 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 department pursuant to subdivision d of subsection 5 of section 33-10-03-05 or in accordance with the specifications contained in a specific license issued by the United States nuclear regulatory commission ~~or~~, an agreement state or a licensing state which authorizes distribution of devices to persons generally licensed by the nuclear regulatory commission ~~or~~, an agreement state or a licensing 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 179.21.)

(3) Any person who owns, receives, acquires, possesses, uses, or transfers radioactive material in a device pursuant to the general license in paragraph 1:

(a) 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.

(b) 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-month intervals or at such other intervals as are specified in the label; however:

[1] Devices containing only krypton need not be tested for leakage of radioactive material.

[2] Devices containing only tritium or not more than one hundred microcuries of other beta or gamma emitting material or ten 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.

(c) Shall assure that the tests required by subparagraph b of paragraph 1 of this subdivision and other testing, installation, servicing, and removal from installation involving the radioactive materials, its shielding or containment, are performed:

[1] In accordance with the instructions provided by the labels; or

[2] By a person holding a specific license from the department, the nuclear regulatory commission, ~~or~~ an agreement state or a licensing state to perform such activities.

(d) Shall maintain records showing compliance with the requirements of subparagraphs b and c. The records shall show the results of tests. The records also shall show the dates of performance of, and the names of persons performing, testing, installation servicing and removal from installation concerning the radioactive material, its shielding or containment.

(e) 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 five-thousandths 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 a specific license from the department, the nuclear regulatory commission ~~or~~, an agreement state or a licensing state to repair such devices, or disposed of by transfer to a person authorized by a specific license to receive the radioactive material contained in the device and, within thirty days, furnish to the department a report containing a brief description of the event and the remedial action taken.

(f) Shall not abandon the device containing radioactive material.

(g) Except as provided in subparagraph h, shall transfer or dispose of the device containing radioactive material only by transfer to a specific licensee of the department, the nuclear regulatory commission, ~~or~~ an agreement state or a licensing state whose specific license authorizes the person to receive the device and within thirty days after transfer of a device to a specific licensee shall furnish to the department 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.

(h) Shall transfer the device to another general licensee only:

[1] Where the device remains in use at a particular location. In such case the transferor shall give the transferee a copy of this chapter and any safety documents identified in the label on the device and within thirty days of the transfer, report to the department the manufacturer's name and model number of device transferred, the name and address of the transferee, and the name or position of an individual who may constitute a point of contract between the department and the transferee; or

[2] 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.

(i) Shall comply with the provisions of subsections 2 and 3 of section 33-10-04-05 for reporting radiation incidents, theft, or loss of licensed material, but shall be exempt from the other requirements of chapters 33-10-04 and 33-10-10.

(4) The general license in paragraph 1 does not authorize the manufacture of devices containing radioactive material.

(5) The general license provided in paragraph 1 is subject to the provisions of sections 33-10-01-01

through 33-10-01-11, subsections 7, 14, and 15 of section 33-10-03-05, and section 33-10-03-07.

c. Luminous safety devices for aircraft.

(1) 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 all of the following are met:

(a) Each device contains not more than ten curies of tritium or three hundred millicuries of promethium-147.

(b) Each device has been manufactured, assembled, or imported in accordance with a specific license issued by the United States nuclear regulatory commission, or each device has been manufactured or assembled in accordance with the specifications contained in a specific license issued by the department or any agreement state to the manufacturer or assembler of such device pursuant to licensing requirements equivalent to those in 10 CFR 32.53 of the regulations of the United States nuclear regulatory commission.

(2) Persons who own, receive, acquire, possess, or use luminous safety devices pursuant to paragraph 1 are exempt from the requirements of chapters 33-10-04 and 33-10-10 except that they shall comply with the provisions of subsections 2 and 3 of section 33-10-04-05.

(3) This general license does not authorize the manufacture, assembly, or repair of luminous safety devices containing tritium or promethium-147.

(4) This general license does not authorize the ownership, receipt, acquisition, possession or use of promethium-147 contained in instrument dials.

(5) This general license is subject to the provisions of sections 33-10-01-01 through 33-10-01-11, subsections 7, 14, and 15 of section 33-10-03-05, and section 33-10-03-07.

d. Ownership of radioactive material. A general license is hereby issued to own radioactive material without regard to quantity. Notwithstanding any other provisions of this chapter, this general license does not authorize the manufacture, production, transfer, receipt, possession or use of radioactive material.

e. Calibration and reference sources.

(1) 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 3 and 4, americium-241 in the form of calibration or reference sources:

(a) Any person who holds a specific license issued by the department which authorizes the person to receive, possess, use, and transfer radioactive material.

(b) Any person who holds a specific license issued by the United States nuclear regulatory commission which authorizes him to receive, possess, use, and transfer special nuclear material.

(2) A general license is hereby issued to own, receive, possess, use, and transfer plutonium in the form of calibration or reference sources in accordance with the provisions of paragraphs 3 and 4 to any person who holds a specific license issued by the department which authorizes the person to receive, possess, use, and transfer radioactive material.

(3) The general licenses in paragraphs 1 and 2 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 commission pursuant to 10 CFR 32.57 or 10 CFR 70.39 or which have been manufactured in accordance with the specifications contained in a specific license issued to the manufacturer by the department ~~or~~, any agreement state or licensing state pursuant to licensing requirements equivalent to those contained in 10 CFR 32.57 or 10 CFR 70.39 of the regulations of the United States nuclear regulatory commission.

(4) The general licenses provided in paragraphs 1 and 2 are subject to the provisions of sections 33-10-01-06 through 33-10-01-11, subsections 7, 14, and 15 of section 33-10-03-05, section 33-10-03-07, and chapters 33-10-04 and 33-10-10. In addition, persons who own, receive, acquire, possess, use, or transfer one or more calibration or reference sources pursuant to these general licenses:

(a) Shall not possess at any one time, at any one location of storage or use, more than five

microcuries of americium-241 and five microcuries of plutonium in such sources.

(b) 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:

[1] The receipt, possession, use, and transfer of this source, Model _____, Serial No. _____, are subject to a general license and the regulations of the United States nuclear regulatory 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) ~~(Showing only the name of the appropriate material.)~~ DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

_____
Name ~~and~~ of manufacturer or importer

[2] The receipt, possession, use, and transfer of this source, Model _____, Serial No. _____, are subject to a general license and the regulations of any licensing state. Do not remove this label.

CAUTION - RADIOACTIVE MATERIAL - THIS SOURCE CONTAINS (AMERICIUM-241). (PLUTONIUM) (Showing only the name of the appropriate material.) DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

_____
Name of manufacturer or importer

(c) Shall not transfer, abandon, or dispose of such source except by transfer to a person authorized by a license from the department, the United States nuclear regulatory commission, or an agreement state to receive the source.

(d) 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 which might otherwise escape during storage.

(e) Shall not use such source for any purpose other than the calibration of radiation detectors or the standardization of other sources.

(5) These general licenses do not authorize the manufacture of calibration or reference sources containing americium-241 ~~or~~, plutonium, or radium-226.

f. Medical diagnostic uses. (Subdivision f of subsection 5 of section 33-10-03-05 requires manufacturers of radiopharmaceuticals which are under the general license in this subdivision to affix a certain identifying label to the container or in the leaflet or brochure which accompanies the radiopharmaceutical. The new drug provisions of the Federal Food, Drug, and Cosmetic Act also govern the availability and use of any specific diagnostic drugs in interstate commerce.)

(1) A general license is hereby issued to any physician to receive, possess, transfer, or use radioactive material set forth below for the stated diagnostic uses, provided, however, that the use is in accordance with the provision of paragraphs 2, 3, and 4, the radioactive material is in the form of capsules, disposable syringes, or other prepackaged individual doses; and the radioactive material has been manufactured in accordance with a specific license issued pursuant to subdivision g of subsection 5 of section 33-10-03-05 by the department, the United States nuclear regulatory commission, ~~or~~ any agreement state or licensing state authorizing distribution under the general license granted in this subdivision 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 for determination of red blood cell volumes and studies of red blood cell survival time.

(2) No physician shall receive, possess, use, or transfer radioactive material pursuant to the general license established by paragraph 1 until the physician has filed Department Form RAD 684, "Certificate - Medical Use of Radioactive Material Under General License" with the department and received from the department a validated copy of the Department Form RAD 684 with certification number as signed. The generally licensed physician shall furnish on Department Form RAD 684 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 this state.

(c) A statement that the generally licensed physician has appropriate radiation measuring instruments to carry out the diagnostic procedures for which the physician proposes to use radioactive material under the general license of this paragraph and that the physician is competent in the use of such instruments.

(3) A physician who receives, possesses, or uses a pharmaceutical containing radioactive material pursuant to the general license established by paragraph 1 shall comply with the following:

(a) The physician shall not possess at any one time, pursuant to the general license in paragraph 1 more than:

[1] Two hundred microcuries of iodine-131.

[2] Two hundred microcuries of iodine-125.

[3] Five microcuries of cobalt-57.

[4] Five microcuries of cobalt-58.

[5] Five microcuries of cobalt-60.

[6] Two hundred microcuries of chromium-51.

(b) The physician shall store the pharmaceutical until administered in the original shipping container, or a container providing equivalent radiation protection.

(c) The physician shall use the pharmaceutical only for the uses authorized by paragraph 1.

(d) The physician shall not administer the pharmaceutical to a woman with confirmed pregnancy or to a person under eighteen years of age.

(e) The physician shall not transfer the radioactive material to a person who is not authorized to receive it pursuant to a license issued by the department, the United States nuclear regulatory commission ~~or~~, any agreement state or a licensing 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.

(4) The generally licensed physician possessing or using radioactive material under the general license of paragraph 1 shall report in duplicate to the department, any changes in the information furnished by the physician in the "Certificate - Medical Use of Radioactive Material Under General License," Department Form RAD 684. The report shall be submitted within thirty days after the effective date of such change.

(5) Any person using radioactive material pursuant to the general license of paragraph 1 is exempt from the requirements of chapters 33-10-04 and 33-10-10 with respect to the radioactive material covered by the general license.

g. General license for use of radioactive material for certain in vitro clinical or laboratory testing. (The new drug provisions of the Federal Food, Drug, and Cosmetic Act also govern the availability and use of any specific diagnostic drugs in interstate commerce.)

(1) A general license is hereby issued to any physician, veterinarian in the practice of veterinary medicine,

clinical laboratory or hospital to receive, acquire, possess, transfer or use, for any of the following stated tests, in accordance with the provisions of paragraphs 2, 3, 4, 5, and 6, the following radioactive materials in prepackaged units:

(a) Iodine-125, in units not exceeding ten 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 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 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 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 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 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.

(g) Selenium-75, in units not to exceed ten 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.

(h) Mock iodine-125 reference or calibration sources, in units not exceeding five-hundredths microcurie of iodine-129 and five-thousandths microcurie of americium-241 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.

(2) No person shall receive, acquire, possess, use, or transfer radioactive material pursuant to the general license established by paragraph 1 until the person has filed Department Form RAD 732, "Certificate - In Vitro Testing with Radioactive Material Under General License", with the department and received from the department a validated copy of Department Form RAD 732 with certification number as signed. The physician, veterinarian, clinical laboratory, or hospital shall furnish on Department Form RAD 732 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.

(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 material as authorized under the general license in paragraph 1 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 paragraph 1 shall comply with the following:

(a) The general licensee shall not possess at any one time, pursuant to the general license in paragraph 1 at any one location of storage or use a total amount of iodine-125, iodine-131, ~~and/or~~ selenium-75, iron-59 or cobalt-57 in excess of two hundred 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 paragraph 1.

(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 department, the United States nuclear regulatory commission, ~~or~~ any agreement state or a licensing 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 described in subparagraph h of paragraph 1 as required by subsection 1 of section 33-10-04-04.

(4) The general licensee shall not receive, acquire, possess, or use radioactive material pursuant to paragraph 1.

(a) Except as prepackaged units which are labeled in accordance with the provisions of a specific license issued by the United States nuclear regulatory commission, ~~or~~ any agreement state or a licensing state which authorizes the manufacture and distribution of iodine-125, iodine-131, carbon-14, hydrogen-3 (tritium), ~~or~~ iron-59 ~~for distribution~~, selenium-75, cobalt-57 or mock iodine-125 to persons generally licensed under this paragraph or its equivalent; and

(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 prepackaged unit or appears in a leaflet or brochure which accompanies the package:

[1] 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 commission or of a state ~~with~~ which the commission has entered into an agreement for the exercise of regulatory authority.

_____
Name of manufacturer

[2] This radioactive material shall 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 a licensing state.

_____
Name of manufacturer

(5) The physician, clinical laboratory, or hospital possessing or using radioactive material under the general license of paragraph 1 shall report, in writing, to the department, any changes in the information furnished by the physician, clinical laboratory, or hospital in the "Certificate - In Vitro Testing with Radioactive Material Under General License", Department Form RAD 732. The report shall be furnished within thirty days after the effective date of such change.

(6) Any person using radioactive material pursuant to the general license of paragraph 1 is exempt from the requirements of chapters 33-10-04 and 33-10-10 with respect to radioactive material covered by that general license.

h. Ice detection devices.

(1) 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 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 commission or each device has been manufactured in accordance with the specifications contained in a specific license issued by the department or any agreement state to the manufacturer of such device pursuant to licensing requirements equivalent to those in 10 CFR 32.61 of the regulations of the nuclear regulatory commission.

(2) Persons who own, receive, acquire, possess, use, or transfer strontium-90 contained in ice detection devices pursuant to the general license in paragraph 1.

(a) 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 from the United States nuclear regulatory commission or an agreement state to manufacture or service such devices; or shall dispose of the device pursuant to the provisions of subsection 1.

(b) 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.

(c) Are exempt from the requirements of chapters 33-10-04 and 33-10-10 except that such persons shall comply with the provisions of subsection 1 of section 33-10-04-04, and subsections 2 and 3 of section 33-10-04-05.

(3) This general license does not authorize the manufacture, assembly, disassembly or repair of strontium-90 in ice detection devices.

(4) This general license is subject to the provisions of sections 33-10-01-06 through 33-10-01-11, subsections 7, 14, and 15 of section 33-10-03-05, and section 33-10-03-07.

i. General licensed quantities for radium-226.

(1) A general license is hereby issued to commercial and industrial firms, and to research, educational, medical, and governmental institutions to own, receive, acquire, possess, use, and transfer radium-226 in units not exceeding one-tenth microcurie each

in accordance with the provisions of paragraphs 2, 3, and 4.

(2) No such person shall receive, acquire, possess, use, or transfer radium-226 pursuant to the general license established by paragraph 1 until the person has filed Department Form RAD 761 "Certificate - Radium-226 Under General License," with the department and has received from the department a validated copy of Department Form RAD 761 with certification number assigned. The person identified in paragraph 1 shall furnish in Department Form RAD 761 the following information and such other information as may be required by that form:

(a) Name and address of the person identified in paragraph 1.

(b) The location of use.

(c) A statement that such person has appropriate radiation measuring instruments to carry out an adequate program of radiation protection and that the use of authorized material 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 radium-226 pursuant to the general license established by paragraph 1 shall comply with the following:

(a) The general licensee shall not possess at any one time, pursuant to the general license in paragraph 1 at any one location of storage or use, a total amount of radium-226 in excess of five microcuries.

(b) The general licensee shall store the radium-226, until used, in the original shipping container or in a container providing equivalent radiation protection.

(c) 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 department, or any agreement state, nor transfer the radioactive material in any manner other than in the unopened, labeled shipping container as received from the shipper.

(d) The person possessing or using the radioactive material under the general license of paragraph 1 shall report, in writing, to the department, any changes in the information furnished by the person in the "Certificate - Radium-226 Under General License," Department Form RAD 761. The report shall be furnished within thirty days after the effective date of such change.

(e) Any person using radium-226 pursuant to the general license of paragraph 1 is exempt from the requirements of chapters 33-10-04 and 33-10-10 with respect to the radioactive material covered by the general license.

(4) This general license does not authorize the manufacture, commercial distribution, or human use of radium-226.

~~3. Intrastate transportation of radioactive material.~~

~~a. 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 United States Department of transportation insofar as such regulations relate to the loading and storage of packages, placarding of the transporting vehicle, and incident reporting. (Any notification of incidents referred to in these requirements shall be filed with, or made to the department.) Persons who transport and store radioactive material pursuant to the general license in this subdivision are exempt from the requirements of chapters 33-10-04 and 33-10-10.~~

~~b. 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 United State department of transportation insofar as such regulations relate to the loading and storage of packages, placarding of the transporting vehicle, and incident reporting.~~

~~(1) Persons who transport radioactive material pursuant to the general license in~~

~~subdivision b are exempt from the requirements of chapters 33-10-04 and 33-10-10 to the extent that they transport radioactive material.~~

~~(2) Physicians, as defined in subsection 26 of section 33-10-01-04 are exempt from the requirements of subdivision b to the extent that they transport radioactive material for use in the practice of medicine.~~

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-04
Law Implemented: NDCC 23-20.1-04

33-10-03-05. Specific licenses.

1. Filing application for specific licenses.

   a. Applications for specific licenses shall be filed in triplicate on a form prescribed by the department.

   b. The department 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 department to determine whether the application should be granted or denied or whether a license should be modified or revoked.

   c. Each application shall be signed by the applicant or licensee or a person duly authorized to act for and on the applicant's behalf.

   d. An application for a license may include a request for a license authorizing one or more activities.

   e. In the application, the applicant may incorporate by reference information contained in previous applications, statements, or reports filed with the department provided such references are clear and specific.

   f. Applications and documents submitted to the department shall be made available for public inspection except that the department may withhold any document or part thereof from public inspection if disclosure of its content is not required in the public interest and would adversely affect the interest of a person concerned.

2. General requirements for the issuance of specific licenses. A license will be granted if the department determines all of the following:

a. The applicant is qualified by reason of training and experience to use the material in question for the purpose requested in accordance with this chapter in such a manner as to minimize danger to public health and safety or property.

b. The applicant's proposed equipment, facilities, and procedures are adequate to minimize danger to public health and safety or property.

c. The issuance of the license will not be inimical to the health and safety of the public.

d. The applicant satisfies any applicable special requirements in subsections 3, 4, or 5.

e. In the case of an application for a license to receive and possess radioactive material for commercial waste disposal by land burial, source material milling, or for the conduct of any other activity which the department determines will significantly affect the quality of the environment, the department, before commencement of construction of the plant or facility in which the activity will be conducted, 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 paragraph 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 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.

f. (1) Pursuant to subsection 2 of section 23-20.1-04 of the North Dakota Century Code, and except as otherwise provided, financial surety arrangements for site reclamation and long-term surveillance and control which may consist of surety bonds, cash deposits, certificates of deposit, deposits of government securities, letters or lines of credit, or any combination of the above for the categories of licensees listed in paragraph 4 shall be established to ensure the protection of the public health and safety in the event of abandonment, default, or other

inability of the licensee to meet the requirements of the North Dakota Century Code and this article.

(a) The amount of funds to be ensured by such surety arrangements shall be based on department-approved cost estimates.

(b) Self-insurance, or any arrangement which essentially constitutes self-insurance, e.g., a contract with a state or federal agency, will not satisfy the surety requirement since this provides no additional assurance other than that which already exists through license requirements.

(2) The arrangements required in paragraph 1 shall be established prior to commencement of operations to assure that sufficient funds will be available to carry out the decontamination and decommissioning of the facility.

(3) Amendments to licenses in effect on (the effective date of this section) may be issued providing that the required surety arrangements are established within ninety days after the effective date of this subdivision.

(4) The following specific licensees are required to make financial surety arrangements:

(a) Major processors.

(b) Waste handling licensees.

(c) Former United States atomic energy commission or United States nuclear regulatory commission licensed facilities.

(d) Source material milling operations.

(e) All others except persons exempt pursuant to paragraph 6.

(5) For source material milling operations, the amount of funds to be ensured by such surety arrangements shall be based on department-approved cost estimates in an approved plan for (a) decontamination and decommissioning of mill buildings and the milling site to levels which would allow unrestricted use of these areas upon decommissioning, and (b) the reclamation of tailings or waste disposal areas in accordance with the technical criteria delineated in chapter 33-10-03. The licensee shall submit this

plan in conjunction with an environmental report that addresses the expected environmental impacts of the milling operation, decommissioning and tailings reclamation, and evaluates alternative for mitigating these impacts. In addition, the surety shall cover the payment of the charge for long-term surveillance and control required by the department. In establishing specific surety arrangements, the licensee's costs estimates shall take into account total costs that would be incurred if an independent contractor were hired to perform the decommissioning and reclamation work. In order to avoid unnecessary duplication and expense, the department may accept financial sureties that have been consolidated with financial or surety arrangements established to meet requirements of other federal or state agencies or local governing bodies for such decommissioning, decontamination, reclamation, and long-term site surveillance, provided such arrangements are considered adequate to satisfy these requirements and that portion of the surety which covers the decommission and reclamation of the mill, mill tailings site and associated areas, and the long-term funding charge are clearly identified. The licensee's surety mechanism will be reviewed annually by the department to assure that sufficient funds will be available for completion of the reclamation plan if the work had to be performed by an independent contractor. The amount of surety liability should be adjusted to recognize any increases or decreases resulting from inflation, changes in engineering plans, activities performed, and any other conditions affecting costs. Regardless of whether reclamation is phased through the life of the operation or takes place at the end of operations, an appropriate portion of surety liability shall be retained until final compliance with the reclamation plan is determined. This will yield a surety that is at least sufficient at all times to cover the costs of decommissioning and reclamation of the areas that are expected to be disturbed before the next license renewal. The term of the surety mechanism must be open-ended, unless it can be demonstrated that another arrangement would provide an equivalent level of assurance. This assurance could be provided with a surety instrument which is written for a specified period of time, e.g., five years, yet which must be automatically renewed unless the surety notifies the beneficiary (the department) and the principal (the licensee) some reasonable time, e.g., ninety days, prior to the renewal date of their intention not to renew. In such a situation the surety requirement still exists

and the licensee would be required to submit an acceptable replacement surety within a brief period of time to allow at least sixty days for the department to collect.

(6) The following persons are exempt from the requirements of paragraph 1:

(a) All state, local, or other government agencies, unless they are subject to subparagraphs a or b of paragraph 4.

(b) Persons authorized to possess no more than one thousand times the quantity specified in Schedule B, Exempt Quantities, or combination of radioactive material listed therein as given in note 1, Schedule B.

(c) Persons authorized to possess hydrogen-3 contained as hydrogen gas in a sealed source.

(d) Persons authorized to possess radioactive noble gases in sealed sources with no radioactive daughter product with half-life greater than thirty days.

(7) The requirements of paragraph 1 will not be applicable to uranium mill tailings licensees after September 30, 1983, or whenever this state obtains an amended agreement with the United States nuclear regulatory commission pursuant to the Uranium Mill Tailings Radiation Control Act of 1978, as amended [42 U.S.C. 7901 et seq.].

g. Long-term care requirements. Pursuant to North Dakota Century Code section 23-20.1-04, and as otherwise provided, a long-term care trust fund shall be established by the following specific licensees prior to the issuance of the license. (Long-term care funding may also be required for former United States atomic energy commission or United States nuclear regulatory commission licensed facilities.)

(1) Waste handling licensees.

(2) Source material milling licensees.

h. Continued surveillance requirements for source material mills.

(1) The final disposition of tailings or wastes at source material milling sites should be such that the need for ongoing active maintenance is not necessary to

preserve isolation. As a minimum, annual site inspections shall be conducted by the department retaining ultimate custody of the site where tailings, or wastes are stored to confirm the integrity of the stabilized tailings, or waste systems and to determine the need, if any, for maintenance or monitoring. Results of the inspection shall be reported to the United States nuclear regulatory commission within sixty days following each inspection, if, on the basis of a site-specific evaluation, such a need appears necessary due to the features of a particular tailings or waste disposal system.

(2) A minimum charge of two hundred fifty thousand dollars (1978 dollars) to cover the costs of long-term surveillance shall be paid by each mill operator to the department prior to the termination of a uranium or thorium mill license. If site surveillance or control requirements at a particular site are determined, on the basis of a site-specific evaluation, to be significantly greater than those specified in paragraph 1, e.g., if fencing is determined to be necessary, variance in funding requirements may be specified by the department. The total charge to cover the costs of long-term surveillance shall be such that, with an assumed one percent annual real interest rate, the collected funds will yield interest in an amount sufficient to cover the annual costs of site surveillance. The charge will be adjusted annually prior to actual payments to recognize inflation. The inflation rate to be used is that indicated by the change in the consumer price index published by the United States department of labor, bureau of labor statistics.

3. Special requirements for issuance of certain specific licenses for radioactive material.

a. Human use of radioactive material in institutions. In addition to the requirements set forth in subsection 2, a specific license for human use of radioactive material in institutions will be issued if all of the following are met:

(1) The applicant has appointed a ~~radiation safety committee of at least three members to coordinate the use of radioactive material throughout that institution and to maintain surveillance over the institution's radiation safety program~~ medical isotopes committee of at least three members to evaluate all proposals for research, diagnostic, and therapeutic

use of radioactive material within that institution. Membership of the committee shall include a physician recognized as a specialist in nuclear medicine, a person with a special competence in radiation safety, and a representative of the institution's management.

(2) The applicant possesses adequate facilities for the clinical care of patients.

(3) The physician designated on the application as the individual user has substantial experience in the handling and administration of radioactive material and, where applicable, the clinical management of radioactive patients.

(4) If the application is for a license to use unspecified quantities or multiple types of radioactive material, the applicant's staff has substantial experience in the use of a variety of radioactive materials for a variety of human uses.

b. Licensing of individual physicians for human use of radioactive material.

(1) An application by an individual physician or group of physicians for a specific license for human use of radioactive material will be approved if all of the following are met:

(a) The applicant satisfies the general requirements specified in subsection 2.

(b) The application is for use in the applicant's private practice in ~~his~~ the applicant's private office.

(c) The applicant has access to a hospital possessing adequate facilities to hospitalize and monitor the applicant's radioactive patients whenever it is advisable.

(d) The applicant has extensive experience in the proposed use, the handling and administration of radioactive material, and where applicable, the clinical management of radioactive patients. (The physician shall furnish suitable evidence of such experience with the application. A statement from the ~~radiation safety~~ medical isotopes committee in the institution where the physician acquired experience, indicating its amount and nature, may be submitted as evidence of such experience.)

(2) The department will not approve 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 hospital or clinic unless ~~all of the following are met~~:

(a) The use of radioactive material is limited to ~~the administration of radiopharmaceuticals to patients and the performance of diagnostic studies on those patients.~~:

[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.

[4] The calibration and quality control checks of radioactive assay instrumentation, radiation safety instrumentation and diagnostic instrumentation.

(b) ~~The hospital or clinic does not hold radioactive material under subdivision a.~~ The physician brings the radioactive material with the physician and removes the radioactive material when the physician departs. (The institution cannot receive, possess, or store radioactive material other than the amount of material remaining in the patient.)

(c) The medical institution does not hold a radioactive material license under subdivision a.

c. Specific licenses for certain groups of medical uses of radioactive material.

(1) Subject to the provisions of paragraphs 2, 3, and 4, an application for a specific license pursuant to subdivision a or b for any medical use or uses of radioactive material specified in one or more of Groups I through VI of Schedule C of this chapter will be approved for all of the uses within the group or groups which include the use or uses specified in the application if:

(a) The applicant satisfies the requirements of subdivisions a, b, and d.

(b) 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.

(c) 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.

(d) The applicant's radiation detection and measuring instrumentation is adequate for conducting the procedures involved in the uses included in the group or groups.

(e) 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.

(2) Any licensee who is authorized to use radioactive material pursuant to one or more groups in paragraph 1 and Schedule C of this chapter is subject to the following conditions:

(a) For Groups I, II, IV, and V, 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 ~~any of the following:~~ a specific license issued by the department pursuant to subdivision j of subsection 5, a specific license issued by the United States nuclear regulatory commission pursuant to 10 CFR 32.72, or a specific license issued by an agreement state or a licensing state pursuant to equivalent regulations.

~~(1) A specific license issued by the department pursuant to subdivision j of subsection 5 or an application filed with the department pursuant to subdivision j of subsection 5 on or before July 1, 1977, for a license or manufacture and distribute a radiopharmaceutical~~

~~that the applicant distributed commercially on or before July 1, 1977, on which application the department has not acted.~~

~~(2) A specific license issued by the United States nuclear regulatory commission pursuant to section 32.72 of 10 C.F.R. part 32 or an application filed with the United States atomic energy commission pursuant to section 32.72 of 10 C.F.R. part 32 on or before October 15, 1974, for a license to manufacture and distribute a radiopharmaceutical that the applicant distributed commercially on or before August 16, 1974, on which application the United States nuclear regulatory commission has not acted.~~

~~(3) A specific license issued by an agreement state pursuant to equivalent regulations or an application filed with an agreement state pursuant to equivalent regulations on or before July 1, 1977, for a license to manufacture and distribute a radiopharmaceutical that the applicant distributed commercially on or before July 1, 1977, on which application the agreement state has not acted.~~

(b) For Group III, 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:

[1] Reagent kits not containing radioactive material that are approved by the department, the United States nuclear regulatory commission ~~or~~, an agreement state or a licensing state for use by persons licensed pursuant to this subdivision and Schedule C of this chapter or equivalent regulations.

[2] Generators or reagent kits containing radioactive material that are manufactured, labeled, packaged, and distributed in accordance with a specific license issued by the department pursuant to subdivision k of this subsection ~~5 or~~, a specific license issued by the United States nuclear regulatory commission pursuant to 10 CFR 32.73, or a specific license issued by an agreement state or a licensing state pursuant to equivalent regulations.

~~(3) Generators or reagent kits containing radioactive material that are manufactured, labeled, packaged, and distributed in accordance with a specific license issued by the United States nuclear regulatory commission pursuant to section 32.73 of 10 C.F.R. part 32.~~

~~(4) Generators or reagent kits containing radioactive material that are manufactured, labeled, packaged, and distributed in accordance with a specific license issued by an agreement state pursuant to equivalent regulations.~~

~~(5) Generators or reagent kits that a manufacturer distributed on or before July 1, 1977, for which an application for license or approval was filed with the department pursuant to subdivision k or subsection 5 on or before July 1, 1977, on which application the department has not acted.~~

~~(6) Generators or reagent kits that a manufacturer distributed on or before August 16, 1974, for which an application for license or approval was filed with the atomic energy commission pursuant to section 32.73 of 10 C.F.R. part 32 on or before October 15, 1974, on which application the United States nuclear regulatory commission has not acted.~~

~~(7) Generators or reagent kits that a manufacturer distributed on or~~

~~before July 1, 1977, for which an application for license or approval was filed with an agreement state pursuant to equivalent regulations on or before July 1, 1977, on which application the agreement state has not acted.~~

(c) For Group VI, no licensee shall receive, possess, or use radioactive material except as contained in a source or device that has been manufactured, labeled, packaged, and distributed in accordance with ~~any of the following:~~ a specific license issued by the department pursuant to subdivision 1 of subsection 5, a specific license issued by the United States nuclear regulatory commission pursuant to 10 CFR 32.74, or a specific license issued to the manufacturer by an agreement state or a licensing state pursuant to equivalent regulations.

~~(1) A specific license issued by the department pursuant to subdivision 1 of subsection 5 or an application filed with the department pursuant to subdivision 1 of subsection 5 on or before July 1, 1977, for a license to manufacture a source or device that the applicant distributed commercially on or before July 1, 1977, on which application the department has not acted;~~

~~(2) A specific license issued by the United States nuclear regulatory commission pursuant to section 32.74 of 10 C.F.R. part 32 or an application filed with the United States atomic energy commission pursuant to section 32.74 of 10 C.F.R. part 32 on or before October 15, 1974, for a license to manufacture a source or device that the applicant distributed commercially on or before August 16, 1974, on which application the United States nuclear regulatory commission has not acted.~~

~~(3) A specific license issued by an agreement state pursuant to~~

~~equivalent regulations or an application filed with an agreement state pursuant to equivalent regulations on or before July 1, 1977, for a license to manufacture a source or device that the applicant distributed commercially on or before July 1, 1977, on which application the agreement state has not acted.~~

(d) For Group III, any licensee ~~or registrant who uses generators or reagent kits shall elute the generator or process radioactive material with the reagent kit in accordance with instructions which are approved by the department, the United States nuclear regulatory commission, or an agreement state and are furnished by the manufacturer on the label attached to or in the leaflet or brochure which accompanies the generator or reagent kit~~ using generators or reagent kits shall:

[1] Elute the generator, or process radioactive material with the reagent kit, in accordance with instructions approved by the department, the United States nuclear regulatory commission, an agreement state or a licensing state and furnished by the manufacturer on the label attached to or in the leaflet or brochure that accompanies the generator or aging kit.

[2] Before administration to patients, cause each elution or extraction of technetium-99m generator to be tested to determine either the total molybdenum-99 activities or the concentration of molybdenum-99 activities. This testing shall be conducted according to written procedures and by personnel who have been specifically trained to perform the test.

[3] Prohibit the administration to patients of technetium-99m containing more than one microcurie of molybdenum-99 per millicurie of technetium-99m, or more than five microcuries of molybdenum-99 per administer dose, at the time of administration.

[4] Maintain for department inspection records of the molybdenum-99 test conducted on each elution from the generator.

(e) For Group VI any licensee who possesses and uses sources or devices containing radioactive material shall:

[1] Cause each source or device containing more than one hundred microcuries of radioactive material with a half-life greater than thirty days, except iridium-192 seeds encased in nylon ribbon, to be tested for contamination or leakage at intervals not to exceed six months or at such other intervals as are approved by the department, the United States nuclear regulatory commission, ~~or~~ an agreement state or a licensing 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 months prior to the transfer.

[2] Assure that the test required by item 1 of this subparagraph shall be capable of detecting the presence of five-thousandths microcurie of radioactive material on the test sample or in the case of radium, the escape of radon at the rate of one-thousandths microcurie per twenty-four 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. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the department.

[3] If the test required by item 1 of this subparagraph reveals the presence of five-thousandths microcurie or more of removable contamination or in the case of radium, the escape of radon at the rate of one-thousandths microcurie per twenty-four hours, immediately withdraw the source from

use and cause it to be decontaminated and repaired or to be disposed of in accordance with department regulations. A report shall be filed within five days of the test with the department, describing the equipment involved, the test results, and the corrective action taken.

[4] Follow the radiation safety and handling instructions approved by the department, the United States nuclear regulatory commission, ~~or~~ an agreement state or a licensing 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.

[5] Conduct a quarterly physical inventory to account for all sources and devices received and possessed. Records of the inventories shall be maintained for inspection by the department and shall include the quantities and kinds of radioactive material, location of sources and devices, and the date of the inventory.

[6] Assure that needles or standard medical applicator cells containing radium-226, or cobalt-60 as wire are not opened while in the licensee's possession unless specifically authorized by a license issued by the department.

[7] Assure that patients ~~containing cobalt-60, cesium-137, or irridium-192 implants shall remain hospitalized until the implants are removed~~ treated with cobalt-60, cesium-137, irridium-192, or radium-226 implants remain hospitalized until a source count and a radiation survey or the patient confirms that all implants have been removed.

(3) Any licensee who is licensed pursuant to paragraph 1 for one or more of the medical use groups in Schedule C also is authorized to use radioactive material under the general license in subdivision g of subsection 2 of section 33-10-03-04 for the specified in vitro uses without filing Form RAD 732 as required

by paragraph 2 of that subdivision; provided, that the licensee is subject to the other provisions of that subdivision.

(4) Any licensee who is licensed pursuant to paragraph 1 for one or more of the medical use groups in Schedule C also is authorized subject to the provisions of this paragraph and paragraph 5, to receive, possess, and use for calibration and reference standards:

(a) Any radioactive material listed in Group I, Group II, or Group III of Schedule C to this chapter with a half-life not longer than one hundred days, in amounts not to exceed fifteen millicuries total.

(b) Any radioactive material listed in Group I, Group II, or Group III of Schedule C to this chapter with half-life greater than one hundred days in amounts not to exceed two hundred microcuries total.

(c) Technetium 99m in amounts not to exceed thirty millicuries.

(d) Any radioactive material, in amounts not to exceed three 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 department pursuant to subdivision a of subsection 5, a specific license issued by the United States nuclear regulatory commission pursuant to 10 CFR 32.74, or a specific license issued to the manufacturer by an agreement state or a licensing state pursuant to equivalent regulations.

[1] A specific license issued by the department pursuant to subdivision 1 of subsection 5 or an application filed with the department pursuant to subdivision 1 of subsection 5 on or before July 1, 1977, for a license to manufacture and distribute a source that the applicant distributed commercially on or before July 1, 1977, on which application the department has not acted.

[2] A specific license issued by the nuclear regulatory commission pursuant to 10 CFR 32.74 or an application filed with the United States atomic energy commission pursuant to 10 CFR 32.74 on or before

October 15, 1974, for a license to manufacture and distribute a source that the applicant distributed commercially on or before August 16, 1974, on which application the United States nuclear regulatory commission has not acted.

[3] A specific license issued by an agreement state pursuant to equivalent regulations or an application filed with an agreement state pursuant to equivalent regulations on or before July 1, 1977, for a license to manufacture and distribute a source that the applicant distributed commercially on or before July 1, 1977, on which application the agreement state has not acted.

(5) (a) Any licensee or registrant who possesses sealed sources as calibration or reference sources pursuant to paragraph 4 shall cause each sealed source containing radioactive material, other than hydrogen 3, with a half-life greater than thirty days in any form other than gas to be tested for leakage or contamination at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, the sealed source should not be used until tested, provided, however, that no leak tests are required when:

[1] The source contains one hundred microcuries or less of beta or gamma, or both, emitting material or ten microcuries or less of alpha emitting material; or

[2] The sealed source is stored and is not being used; such sources shall, however, be tested for leakage prior to any use or transfer unless they have been leak tested within six months prior to the date of use or transfer.

(b) The leak test shall be capable of detecting the presence of five-thousandths microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is mounted or stored on which contamination might be expected to accumulate. Records of leak test results shall

be kept in units of microcuries and maintained for inspection by the department.

(c) If the leak test reveals the presence of five-thousandths microcurie or more of removable contamination, the licensee or registrant shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with this chapter and chapter 33-10-04. A report shall be filed within five days of the test with the department describing the equipment involved, the test results, and the corrective action taken.

(6) Any licensee or registrant who possesses and uses calibration and reference sources pursuant to subparagraph d of paragraph 4 shall:

(a) Follow the radiation safety and handling instructions approved by the department, the United States nuclear regulatory commission, ~~or~~ an agreement state or a licensing 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.

(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 department and shall include the quantities and kinds of radioactive material, location of sources, and the date of the inventory.

d. Human use of sealed sources. In addition to the requirements set forth in subsection 2, a specific license for human use of sealed sources will be issued only if the applicant or, if the application is made by an institution, the individual user (1) has specialized training in the diagnostic or therapeutic use of the sealed source considered, or has experience equivalent to such training, and (2) is a physician.

e. Use of sealed sources in industrial radiography. In addition to the requirements set forth in subsection 2, a specific license for use of sealed sources in industrial radiography will be issued if all of the following are met:

(1) The applicant will have an adequate program for training radiographers and radiographer's assistants and submits to the department 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 to determine the radiographer's knowledge and understanding of and ability to comply with department regulations and licensing requirements, and the operating and emergency procedures of the applicant.

(e) Means to be used by the licensee to determine the radiographer's assistant's knowledge and understanding of and ability to comply with the operating and emergency procedures of the applicant.

(2) The applicant has established and submits to the department satisfactory written operating and emergency procedures described in subsection 2.

(3) ~~The applicant will have an adequate internal inspection system, or other management control, to assure that license provisions, regulations, and the applicant's operating and emergency procedures are followed by radiographers and radiographer's assistants.~~ Management control shall begin upon becoming a licensee and a quarterly inspection shall be conducted thereafter to assure that license provisions, regulations, and operating and emergency procedures are being followed by radiographers and radiographers' assistants.

(4) The applicant submits to the department a description of the applicant's overall organizational structure pertaining to the industrial radiography program, including specified delegations of authority and responsibility for operation of the program.

(5) The applicant who desires to conduct the applicant's own leak tests has established adequate procedures to be followed in leak testing sealed sources for possible leakage and contamination and submits to the department 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.

(c) Pertinent experience of the person who will perform the test.

(6) The applicant will conduct a program for inspection and maintenance of radiographic exposure devices and storage containers to assure proper functioning of components important to safety.

4. Special requirements for specific licenses of broad scope. This subsection prescribes requirements for the issuance of specific licenses of broad scope for radioactive material ("broad licenses") and certain regulations governing holders of such licenses. (Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or byproduct material whose subsequent possession, use, transfer, and disposal by all other persons are exempted from regulatory requirements may be obtained only from the United States nuclear regulatory commission, Washington, D.C. 20555.)

a. The different types of broad licenses are set forth below:

(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 Schedule D, for any authorized purpose. The possession limit for a Type B broad license, if only one radionuclide is possessed thereunder, is the quantity specified for that radionuclide in Schedule D, Column I. If two 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 Schedule D, Column I, 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 Schedule D, for any authorized purpose. The possession limit for a Type C broad license, if only one radionuclide is possessed thereunder, is the quantity specified for that radionuclide in Schedule D, Column II. If two 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 Schedule D, Column II, for that radionuclide. The sum of the ratios for all radionuclides possessed under the license shall not exceed unity.

b. An application for a Type A specific license of broad scope will be approved if all of the following are met:

(1) The applicant satisfies the general requirements specified in subsection 2.

(2) The applicant has engaged in a reasonable number of activities involving the use of radioactive material.

(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 safety officer, a representative of management, and persons trained and experienced in the safe use of radioactive material.

(b) The appointment of a radiation safety officer who is qualified by training and experience in radiation protection, and who is available for advice and assistance on radiation safety matters.

(c) The establishment of appropriate administrative procedures to assure:

[1] Control of procurement and use of radioactive material.

[2] Completion of safety evaluations 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.

[3] Review, approval, and recording by the radiation safety committee of safety evaluation of proposed uses prepared in accordance with item 2 of this subparagraph prior to use of the radioactive material.

c. An application for a Type B specific license of broad scope will be approved if all of the following are met:

(1) The applicant satisfies the general requirements specified in subsection 2.

(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 safety officer who is qualified by training and experience in radiation protection, and who is available for advice and assistance on radiation safety matters.

(b) The establishment of appropriate administrative procedures to assure:

[1] Control of procurement and use of radioactive material.

[2] Completion of safety evaluations 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.

[3] Review, approval, and recording by the radiation safety officer of safety evaluations of proposed uses prepared in accordance with item 2 of this ~~division~~ subparagraph prior to use of the radioactive material.

d. An application for a Type C specific license of broad scope will be approved if all of the following are met:

(1) The applicant satisfies the general requirements specified in subsection 2.

(2) The applicant submits a statement that radioactive material will be used only by, or under the direct supervision of, individuals who have received all of the following:

(a) A college degree at the bachelor level, or equivalent training and experience, in the physical or biological sciences or in engineering.

(b) At least forty hours of training and experience in the safe handling of radioactive material, 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.

(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.

e. Specific licenses of broad scope are subject to the following conditions:

(1) Persons licensed pursuant to this subsection shall not:

(a) Conduct tracer studies in the environment involving direct release of radioactive material.

(b) Receive, acquire, own, possess, use, or transfer devices containing one hundred thousand 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 department under ~~subsections~~ subsection 3 or 5 is required.

(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 subsection 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 subsection 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 officer.

(4) Each Type C specific license of broad scope issued under this subsection 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 who satisfy the requirements of subdivision d.

5. Special requirements for specific license to manufacture, assemble, repair, or distribute commodities, products, or devices which contain radioactive material.

a. Licensing the introduction of radioactive material into products in exempt concentrations. In addition to the requirements set forth in subsection 2, 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 paragraph 1 of subdivision a of subsection 2 of section 33-10-03-02 will be issued 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 or material 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 concentration of the radioactive material in the product or material at the time of transfer.

(2) The applicant provides reasonable assurance that the concentrations of radioactive material at the time of transfer will not exceed the concentrations in Schedule A, that reconcentration of the radioactive material in concentrations exceeding those in

Schedule A is not likely, 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 subsection shall file an annual report with the department 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 time of transfer of the radioactive material by the licensee. If no transfers of the radioactive material have been made pursuant to this division during the reporting period, the report shall so indicate. The report shall cover the year ending June thirtieth, and shall be filed within thirty days thereafter.

b. Licensing the distribution of radioactive material in exempt quantities. (Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or byproduct material whose subsequent possession, use, transfer, and disposal by all other persons are exempted from regulatory requirements may be obtained only from the United States nuclear regulatory commission, Washington, D.C. 20555.)

(1) An application for a specific license to distribute radioactive material other than source or byproduct material to persons exempted from these regulations pursuant to subdivision b of subsection 2 of section 33-10-03-02 will be approved if all of the following are met:

(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.

(c) The applicant submits copies of prototype labels and brochures and the department approves such labels and brochures.

(2) The license issued under paragraph 1 is subject to the following conditions:

(a) No more than ten exempt quantities shall be sold or transferred in any single transaction. However, an exempt quantity may be composed of fractional parts of one or more of the exempt quantity provided the sum of the fractions shall not exceed unity.

(b) Each exempt quantity shall be separately and individually packaged. No more than ten such packaged exempt quantities shall be contained in any outer package for transfer to persons exempt pursuant to subdivision b of subsection 2 of section 33-10-03-02. The outer package shall be such that the dose rate at the external surface of the package does not exceed one-half 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 subparagraph c, the label affixed to the immediate container, or an accompanying brochure, shall (1) state that the contents are exempt from United States nuclear regulatory commission or agreement state requirements or a licensing state; (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 subdivision shall maintain records identifying, by name and address, each person to whom radioactive material is transferred for use under subdivision b of subsection 2 of section 33-10-03-02 or the equivalent regulations of an agreement state or a licensing state, 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 department. Each report shall cover the year ending June thirtieth, and shall be filed within thirty days thereafter. If no transfers of radioactive material have been made pursuant to this subdivision during the reporting period, the report shall so indicate.

c. Licensing the incorporation of radioactive material other than source or byproduct material into gas and aerosol detectors. An application for a specific license authorizing the incorporation of radioactive material other than source or byproduct material into gas and aerosol detectors to be distributed to persons exempt under paragraph 3 of subdivision c of subsection 2 of section 33-10-03-02 will be approved if the application satisfies requirements equivalent to those contained in 10 CFR 32.26 of the regulations of the United States nuclear regulatory commission.

d. Licensing the manufacture and distribution of devices to persons generally licensed under subdivision d of subsection 2 of section 33-10-03-04.

(1) An application for a specific license to manufacture or distribute devices containing radioactive material, excluding special nuclear material, to persons generally licensed under subdivision b of subsection 2 of section 33-10-03-04 or equivalent regulations of the United States nuclear regulatory commission ~~or~~, an agreement state or a licensing state will be approved if:

(a) The applicant satisfies the general requirements of subsection 2 of this section.

(b) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control, labels, proposed uses, installation, servicing, leak testing, operating and safety instructions, and potential hazards of the device to provide reasonable assurance that:

[1] The device can be safely operated by persons not having training in radiological protection.

[2] 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 calendar quarter a dose in excess of ten percent of the limits specified in the table of subdivision a of subsection 1 of section 33-10-04-02.

[3] 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:

[a]	Whole body; head and trunk; active blood-forming organs; gonads; or lens of eye	15 rems
[b]	Hands and forearms; feet and ankles; localized areas of skin averaged over areas no larger than one square centimeter	200 rems
[c]	Other organs	50 rems

(c) Each device bears a durable, legible, clearly visible label or labels approved by the department, which contain in a clearly identified and separate statement:

[1] 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).

[2] 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.

[3] 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 United States nuclear regulatory commission ~~or a~~, an agreement state ~~with which the nuclear regulatory commission has entered into an agreement for the exercise of regulatory authority~~ or a licensing state. (The model, serial number, and name of manufacturer or distributor may be omitted from this label provided they are elsewhere specified in labeling affixed to the device.) This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION-RADIOACTIVE MATERIAL

_____
(name of manufacturer or distributor)

(2) In the event the applicant desires that the device be required to be tested at intervals longer than six months, either for proper operation of the on-off mechanism and indicator, if any, or for leakage of radioactive material or for both, the applicant shall include in the 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 leakage of radioactive material, the department will consider information which includes, but is not limited to:

(a) Primary containment (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 test.

(g) Maximum pressure withstood during prototype tests.

(h) Maximum quantity of contained radioactive material.

(i) Radiotoxicity of contained radioactive material.

(j) Operating experience with identical devices or similarly designed and constructed devices.

(3) In the event the applicant desires that the general licensee under subdivision b of subsection 2 of section 33-10-03-04, or under equivalent regulations of the United States nuclear regulatory commission ~~or~~, an agreement state or a licensing 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 basis 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 percent of the limits specified in the table in subdivision a of subsection 1 of section 33-10-04-02.

(4) Each person licensed under subdivision d to distribute devices to generally licensed persons shall:

(a) Furnish a copy of the general license contained in subdivision b of subsection 2 of section 33-10-04-02 to each person to whom the person directly or through an intermediate person transfers radioactive material in a device for use pursuant to the general license contained in

subdivision b of subsection 2 of section 33-10-03-04.

(b) Furnish a copy of the general license contained in the United States nuclear regulatory commission ~~or~~, agreement state's or licensing state's regulation equivalent to subdivision b of subsection 2 of section 33-10-03-04, or alternatively, furnish a copy of the general license contained in subdivision b of subsection 2 of section 33-10-03-04 to each person to whom the person directly or through an intermediate person transfers radioactive material in a device for use pursuant to the general license of the nuclear regulatory commission ~~or~~, the agreement state or the licensing state. If a copy of the general license in subdivision b of subsection 2 of section 33-10-03-04 is furnished to such a person, it shall be accompanied by a note explaining that the use of the device is regulated by the nuclear regulatory commission ~~or~~, agreement state, or a licensing state under requirements substantially the same as those in subdivision b of subsection 2 of section 33-10-03-04.

(c) Report to the department all transfers of such devices to persons for use under the general license in subdivision b of subsection 2 of section 33-10-03-04. Such report shall identify each general licensee by name and address, an individual by name or position who may constitute a point of contact between the department and the general licensee, the type and model number of device transferred, and the quantity and type of radioactive material contained in the device. If one 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 under subdivision b of subsection 2 of section 33-10-03-04 during the reporting period, the report shall so indicate. The report shall cover each calendar quarter and shall be filed within thirty days thereafter.

(d) [1] Report to the United States nuclear regulatory commission all transfers of such devices to persons for use under the

nuclear regulatory commission general license in 10 CFR 31.5.

[2] Report to the responsible agreement state agency all transfers of such devices to persons for use under a general license in an agreement state's regulations equivalent to subdivision b of subsection 2 of section 33-10-03-04.

[3] Such reports shall identify each general licensee by name and address, an individual by name or position who may constitute a point of contact between the department 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 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 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 United States nuclear regulatory commission licensees during the reporting period, this information shall be reported to the nuclear regulatory commission.

[5] If no transfers have been made to a particular ~~agreement~~ state during the reporting period, this information shall be reported to the responsible ~~agreement~~ state agency upon request of the department.

(e) Keep records showing the name, address, and the point of contact for each general licensee to whom he directly or through an intermediate person transfers radioactive material in devices for use pursuant to the general license provided in subdivision b of subsection 2 of section 33-10-03-04, or equivalent regulations of the United States nuclear regulatory commission or an agreement state. The records should show the date of each transfer, the isotope and the quantity of radioactivity in each device

transferred, the identity of any intermediate person, and compliance with the report requirements of this section.

e. 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 subdivision c of subsection 2 of section 33-10-03-04 will be approved subject to the following conditions:

(1) The applicant satisfies the general requirements specified in subsection 2 of this section.

(2) The applicant satisfies the general requirements of 10 CFR 32.53, 32.54, 32.55, 32.56, and 32.101 or their equivalent.

f. Special requirements for license to manufacture calibration sources containing americium-241 ~~or~~, plutonium, or radium-226 for distribution to persons generally licensed under subdivision e of subsection 2 of section 33-10-03-04 will be approved subject to the following conditions:

(1) The applicant satisfies the general requirement of subsection 2 of this section.

(2) The applicant satisfies the requirements of 10 CFR 32.57, 32.58, 32.59, ~~32.60,~~ and 32.102 ~~and~~ 10 CFR 70.39 or their equivalent.

g. Manufacture and distribution of radioactive material for medical use under general license. In addition to requirements set forth in subsection 2, a specific license authorizing the distribution of radioactive material for use by physicians under the general license in subdivision f of subsection 2 of section 33-10-03-04 will be issued if all of the following are met:

(1) 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 drugs, food and drug administration, has approved, or in accordance with a license for a biologic product issued by the secretary, department of health, education, and welfare.

(2) The following statement, or a substantially similar statement which contains the information called for

in the following statement, appears on the label affixed to the container or appears in the leaflet or brochure which accompanies the package:

(a) 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 its equivalent of the United States nuclear regulatory commission or of a state with which the commission has entered into an agreement for the exercise of regulatory authority.

_____
Name of manufacturer

(b) 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 its equivalent of a licensing state.

_____
Name of manufacturer

h. Manufacture and distribution of radioactive material for certain in vitro clinical or laboratory testing under general license. An application for a specific license to manufacture or distribute radioactive material for use under the general license of subdivision g of subsection 2 of section 33-10-03-04 will be approved if:

(1) The applicant satisfies the general requirements specified in subsection 2 of this section.

(2) The radioactive material is to be prepared for distribution in prepackaged units of:

(a) Iodine-125 in units not exceeding ten microcuries each.

(b) Iodine-131 in units not exceeding ten microcuries each.

(c) Carbon-14 in units not exceeding ten microcuries each.

(d) Hydrogen-3 (tritium) in units not exceeding fifty microcuries each.

(e) Iron-59 in units not exceeding twenty microcuries each.

(f) Cobalt-57 in units not exceeding ten microcuries each.

(g) Selenium-75 in units not exceeding ten microcuries each.

(h) Mock iodine-125 in units not exceeding five-hundredths microcurie of iodine-129 and five-thousandths microcurie of americium-241 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 microcuries of iodine-125, iodine-131, ~~or~~ carbon-14, cobalt-57, or selenium-75; fifty microcuries of hydrogen-3 (tritium); or twenty microcuries of iron-59 or mock iodine-125 in units not exceeding five-hundredths microcurie of iodine-129 and five-thousandths microcurie of americium-241 each.

(b) Displaying the radiation caution symbol described in paragraph 1 of subdivision a of subsection 3 of section 33-10-04-03 and the words, "CAUTION, RADIOACTIVE MATERIAL", and "Not for Internal or External Use in Humans or Animals".

(4) ~~The~~ One of the following ~~statement~~ statements, as appropriate, or a substantially similar statement which contains the information called for in the following ~~statement~~ statements, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure which accompanies the package:

(a) This radioactive material may be received, acquired, possessed, and used only by physicians, 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 commission or of a state with which

the commission has entered into an agreement for the exercise of regulatory authority.

_____
Name of manufacturer

(b) This radioactive material may be received, acquired, possessed, and used only by physicians, 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 a licensing state.

_____
Name of manufacturer

(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.

i. 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 under subdivision h of subsection 2 of section 33-10-03-04 will be approved subject to the following conditions: (1) the applicant satisfies the general requirements of subsection 2 of this section and, (2) the criteria of 10 CFR 32.61, 32.62, ~~32.63,~~ and 32.103 are met.

j. 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 pursuant to subdivision c of subsection 3 for the uses listed in Group I, Group II, Group IV, or Group V of Schedule C to this chapter will be approved if:

(1) The applicant satisfies the general requirements specified in subsection 2.

(2) The applicant submits evidence that:

(a) The radiopharmaceutical containing radioactive material will be manufactured, labeled, and packed in accordance with the Federal Food,

Drug, and Cosmetic Act or the Public Health Service Act, such as a new drug application approved by the food and drug administration, a biologic product license issued by the food and drug administration or a "Notice of Claimed Investigational Exemption for a New Drug" that has been accepted by the food and drug administration; 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.

(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 department for distribution to persons licensed pursuant to subdivision c of subsection 3 Schedule C Group I, Group II, Group IV, and Group V of chapter 33-10-03, as appropriate, or under equivalent licenses of the United States nuclear regulatory commission ~~or~~ , an agreement state ~~or that an application for such license has been filed with the department on or before July 1, 1977, and is still pending~~ or a licensing state.

(b) The labels, leaflets, or brochures required by this subdivision are in addition to the labeling required by the food and drug administration and they may be separate from or, with the approval of the food and drug administration, may be combined with the labeling required by the food and drug administration.

~~(2) If an application is filed pursuant to paragraph 1 before July 1, 1977, for a license to manufacture and distribute a radiopharmaceutical that was distributed commercially on or before July 1, 1977, the~~

~~applicant may continue the distribution of such radiopharmaceutical to group licensees until the department issues the license or notifies the applicant otherwise.~~

k. 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 subdivision c of subsection 3 for the uses listed in Group III of Schedule C of this chapter will be approved if:

(1) The applicant satisfies the general requirements specified in subsection 2.

(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 approved by the food and drug administration, a biologic product license issued by the food and drug administration, or a "Notice of Claimed Investigational Exemption for a New Drug" that has been accepted by the food and drug administration; 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.

(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.

(b) A statement that this generator or reagent kit (as appropriate) is approved for use by persons licensed by the department pursuant to subdivision c of subsection 3 of section 33-10-03-05 and Schedule C Group III of chapter 33-10-03 or under equivalent licenses of the United States nuclear regulatory commission ~~or~~, an agreement state, ~~or that an application for such license has been filed with the department on or before July 1, 1977, and is still pending~~ or a licensing state. The labels, leaflets, or brochures required by this subdivision are in addition to the labeling required by the food and drug administration and they may be separate from or, with the approval of the food and drug administration, may be combined with the labeling required by the food and drug administration.

~~(2) If an application is filed pursuant to paragraph 1 on or before July 1, 1977, for a license to manufacture and distribute a generator or reagent kit that was distributed commercially on or before July 1, 1977, the applicant may continue the distribution of such generator or reagent kit until the department issues the license or notifies the applicant otherwise.~~

Note: Although the department does not regulate the manufacture and distribution of reagent kits that do not contain radioactive material, it does regulate the use of such reagent kits for the preparation of radiopharmaceuticals containing radioactive material as part of its licensing and regulation of the users of radioactive material. Any manufacturer of reagent kits that do not contain radioactive material who desires to have the reagent kits approved by the department for use by persons licensed pursuant to subdivision c of subsection 3 of section 33-10-03-05 and Group III of Schedule C may submit the pertinent information specified in this subdivision to this chapter.

1. Manufacture and distribution of sources or devices containing radioactive material for medical use.

(1) An application for a specific license to manufacture and distribute sources and devices containing radioactive material to persons licensed pursuant to

subdivision c of subsection 3 for use as a calibration or reference source or for the uses listed in Group VI of Schedule C to this chapter will be approved if:

(a) The applicant satisfies the general requirements in subsection 2.

(b) The applicant submits sufficient information regarding each type of source or device pertinent to an evaluation of its radiation safety, including:

[1] The radioactive material contained, its chemical and physical form, and amount.

[2] Details of design and construction of the source or device.

[3] Procedures for, and results of, prototype tests to demonstrate that the source or device will maintain its integrity under stresses likely to be encountered in normal use and accident.

[4] For devices containing radioactive material, the radiation profile of a prototype device.

[5] Details of quality control procedures to assure that production sources and devices meet the standards of the design and prototype tests.

[6] Procedures and standards for calibrating sources and devices.

[7] Legend and methods for labeling sources and devices as to their radioactive content.

[8] Instruction 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~~ in a brochure which is referenced on the label.

(c) 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 department for distribution to persons licensed pursuant to subdivision c of subsection 3 and Schedule C Group VI to this chapter or under equivalent licenses of the United States nuclear regulatory commission ~~or an agreement state or that a pending application for such license has been filed with the department on or before July 1, 1977, provided, that such labeling for sources which do not require long-term storage, e.g., gold-198 seeds, may be on a leaflet or brochure which accompanies the source,~~ an agreement state or a licensing state; provided, that such labeling for sources which do not require long-term storage, e.g., gold-198 seeds, may be on a leaflet or brochure which accompanies the source.

(2) (a) ~~In the event~~ If the applicant desires that the source or device be required to be tested for leakage of radioactive material at intervals longer than six months, the applicant 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 consequences of leakage of radioactive material from the source.

(b) In determining the acceptable interval for test of leakage of radioactive material, the department will consider information that includes, but is not limited to:

[1] Primary containment (source capsule).

[2] Protection of primary containment.

[3] Method of sealing containment.

[4] Containment construction materials.

[5] Form of contained radioactive material.

[6] Maximum temperature withstood during prototype tests.

[7] Maximum pressure withstood during prototype tests.

[8] Maximum quantity of contained radioactive material.

[9] Radiotoxicity of contained radioactive material.

[10] Operating experience with identical sources or devices or similarly designed and constructed sources or devices.

~~(3) If an application is filed pursuant to paragraph 1 on or before July 1, 1977, for a license to manufacture and distribute a source or device that was distributed commercially on or before July 1, 1977, the applicant may continue the distribution of such source or device to group licensees until the department issues the license or notifies the applicant otherwise.~~

m. 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 subdivision e of subsection 1 of section 33-10-03-04 or equivalent regulations of the United States nuclear regulatory commission or an agreement state will be approved if:

(a) The applicant satisfies the general requirements specified in subsection 2 of this section.

(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 calendar quarter a radiation dose in excess of ten percent of the limits specified in subsection 1 of section 33-10-04-02.

(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 department will approve an application for a specific license under this subdivision 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 department may deny any application for a specific license under this subdivision if the end uses of the industrial product or device cannot be reasonably foreseen.

(4) Each person licensed pursuant to paragraph 1 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 United States nuclear regulatory commission or of 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) [1] Furnish a copy of the general license contained in subdivision e of subsection 1 of section 33-10-03-04 and a copy of

department Form RAD811 to each person to whom the person transfers depleted uranium in a product or device for use pursuant to the general license contained in subdivision e of subsection 1 of section 33-10-03-04; or

[2] Furnish a copy of the general license contained in the United States nuclear regulatory commission's or agreement state's regulation equivalent to subdivision 3 of subsection 1 of section 33-10-03-04 and a copy of the United States nuclear regulatory commission's or agreement state's certificate, or alternatively, furnish a copy of the general license contained in subdivision e of subsection 1 of section 33-10-03-04 and a copy of the general license to each person to whom the person transfers depleted uranium in a product or device for use pursuant to the general license of the United State nuclear regulatory commission or an agreement state, with a note explaining that use of the product or device is regulated by the United States nuclear regulatory commission or an agreement state under requirements substantially the same as those in subdivision e of subsection 1 of section 33-10-03-04.

(e) Report to the department all transfers of industrial products or devices to persons for use under the general licensee by name and address, an individual by name and position who may constitute a point of contact between the department 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 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 subdivision e of subsection 1 of section 33-10-03-04 during the reporting period, the report shall so indicate.

(f) [1] Report to the United States nuclear regulatory commission all transfers of industrial products or devices to persons

for use under the United States nuclear regulatory commission general license in 10 CFR 40.25.

[2] Report to the responsible state agency all transfers of devices manufactured and distributed pursuant to this subdivision for use under a general license in that state's regulations equivalent to subdivision e of subsection 1 of section 33-10-03-04.

[3] Such report shall identify each general licensee by name and address, an individual by name and position who may constitute a point of contact between the department 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. The report shall be submitted within thirty days after the end of each calendar quarter in which such product or device is transferred to the generally licensed person.

[4] If no transfers have been made to United States nuclear regulatory commission licensees during the reporting period, this information shall be reported to the United States nuclear regulatory commission.

[5] If no transfers have been made to general licensees within a particular agreement state during the reporting period, this information shall be reported to the responsible agreement state agency.

(g) Keep records showing the name, address, and point of contact for each general licensee to whom the person transfers depleted uranium in industrial products of devices for use pursuant to the general license provided in subdivision e of subsection 1 of section 33-10-03-04 or equivalent regulations of the United States nuclear regulatory commission or of an agreement state. The records shall be maintained for a period of two 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.

n. Special requirements for issuance of specific licenses for source material milling. In addition to the requirements set forth in subsection 2, a specific license for source material milling will be issued if the applicant submits to the department a satisfactory application as described herein and meets the other conditions specified below:

(1) An application for a license to receive title to, receive, possess, and use source material for milling or byproduct material as defined in subdivision b of subsection 6 shall address the following:

(a) Description of the proposed project or action.

(b) Area/site characteristics including geology, topography, hydrology, and meteorology.

(c) Radiological and nonradiological impacts of the proposed project or action, including waterway and ground water impacts.

(d) Environmental effects of accidents.

(e) Tailings disposal and decommissioning.

(f) Site and project alternatives.

(2) Pursuant to subdivision e of subsection 2 the applicant may not commence construction of the project until the department has weighed the environmental, economic, technical, and other benefits against the environmental costs and has concluded that the issuance of the license is appropriate.

(3) At least one full year prior to any major site construction, a preoperational monitoring program shall be conducted to provide complete baseline data on a milling site and its environs. Throughout the construction and operating phases of the mill, an operational monitoring program shall be conducted to measure or evaluate performance of control systems and procedures; to evaluate environmental impacts of operation; and to detect potential long-term effects.

(4) Prior to issuance of the license, the mill operator shall establish financial surety arrangements consistent with the requirements of subdivision f of subsection 2.

(5) The applicant shall provide procedures describing the means employed to meet the following requirements during the operational phase of any project.

(a) Milling operations shall be conducted so that all effluent releases are reduced to as low as is reasonably achievable below the limits of chapter 33-10-04.

(b) The mill operator shall conduct daily inspection of any tailings or waste retention systems. Records of such inspections shall be maintained for review by the department.

(c) The mill operator shall immediately notify the department of the following:

[1] Any failure in a tailings or waste retention system which results in a release of tailings or waste into unrestricted areas.

[2] Any unusual conditions (conditions not contemplated in the design of the retention system) which if not corrected could lead to failure of the system and result in a release of tailings or waste into unrestricted areas.

(6) An application for a license to own, receive, possess and use byproduct material as defined in subsection 6 of section 33-10-01-04 shall contain proposed specifications relating to the emissions control and disposition of the byproduct material to achieve the requirements and objectives set forth in the criteria listed in Schedule E of chapter 33-10-03.

6. Issuance of specific licenses.

a. Upon a determination that an application meets the requirements of North Dakota Century Code chapter 23-20.1 and this chapter, the department will issue a specific license authorizing the proposed activity in such form and containing such conditions and limitations as it deems appropriate or necessary.

b. The department may incorporate in any license at the time of issuance, or thereafter by appropriate rule, regulation, or order, such additional requirements and conditions with respect to the licensee's receipt, possession, use, and transfer of radioactive material subject to this part as it deems appropriate or necessary in order to:

(1) Minimize danger to public health and safety or property.

(2) Require such reports and the keeping of such records, and to provide for such inspections of activities under the license as may be appropriate or necessary.

(3) Prevent loss or theft of material subject to this chapter.

7. Specific terms and conditions of licenses.

a. Each license issued pursuant to this chapter shall be subject to all the provisions of North Dakota Century Code chapter 23-20.1 and to all applicable rules, regulations, and orders of the department.

b. No license issued or granted under this chapter and no right to possess or utilize radioactive material granted by any license issued pursuant to this chapter 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 department shall, after securing full information find that the transfer is in accordance with the provisions of North Dakota Century Code chapter 23-20.1, and shall give its consent in writing.

c. Each person licensed by the department pursuant to this chapter shall confine the person's use and possession of the material licensed to the locations and purposes authorized in the license.

d. Each licensee shall notify the department in writing when the licensee decides to permanently discontinue all activities involving materials authorized under the license.

8. Expiration of licenses. Except as provided in subdivision b of subsection 9, each specific license shall expire at the end of the day, in the month and year stated therein.

9. Renewal of licenses.

a. Applications for renewal of specific licenses shall be filed in accordance with subsection 1.

b. In any case in which a licensee, not less than thirty days prior to expiration of the licensee's 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 department.

10. Amendment of licenses at request of licensee. Applications for amendment of a license shall be filed in accordance with

subsection 1 and shall specify the respects in which the licensee desires the license to be amended and the grounds for such amendment.

11. Department action on applications to renew or amend. In considering an application by a licensee to renew or amend the license, the department will apply the criteria set forth in ~~subsections~~ subsection 2, 3, 4, or 5 as applicable.

~~12. Persons possessing a license for source, byproduct, or special nuclear material in quantities not sufficient to form a critical mass on April 4, 1977. Any person who, on April 4, 1977, possesses a general or specific license for source, byproduct, or special nuclear material in quantities not sufficient to form a critical mass, issued by the United States nuclear regulatory commission, shall be deemed to possess a like license issued under this chapter and North Dakota Century Code chapter 23-20.1, such license to expire either ninety days after receipt from the department of a notice of expiration of such license, or on the date of expiration specified in the United States nuclear regulatory commission license, whichever is earlier.~~

~~13. Persons possessing radioactive material other than source, byproduct, or special nuclear material on April 4, 1977. Any person who, on April 4, 1977, possesses naturally occurring or accelerator-produced radioactive material for which a specific license is required by this chapter or North Dakota Century Code chapter 23-20.1 shall be deemed to possess such a license issued under this chapter and North Dakota Century Code chapter 23-20.1. Such license shall expire ninety days after April 4, 1977, provided, however, that if within the ninety days the person possessing such material files a completed application for a license, such existing license shall not expire until the application has been finally determined by the department.~~

~~14.~~ 12. Transfer of material.

a. No licensee shall transfer radioactive material except as authorized pursuant to this subsection.

b. Except as otherwise provided in one's license and subject to the provisions of subdivisions c and d, any licensee may transfer radioactive material:

(1) To the department. (A licensee may transfer material to the department only after receiving prior approval from the department.)

(2) To the United States ~~energy research and development administration~~ department of energy.

(3) To any person exempt from the regulations in this chapter to the extent permitted under such exemption.

(4) 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 department, the United States nuclear regulatory commission, ~~or~~ any agreement state or any licensing state, or to any person otherwise authorized to receive such material by the federal government or any agency thereof, the department, ~~or~~ any agreement state or licensing state.

(5) As otherwise authorized by the department in writing.

c. Before transferring radioactive material to a specific licensee of the department, the United States nuclear regulatory commission, ~~or any~~ an agreement state or licensing state, or to a general licensee who is required to register with the department, the United States nuclear regulatory commission, ~~or~~ an agreement state or licensing 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.

d. The following methods for the verification required by subdivision c are acceptable:

(1) The transferor may have in the transferor's possession, and read, a current copy of the transferee's ~~,~~ specific license ~~,~~ or registration certificate.

(2) The transferor may have in the transferor's possession a written certification by the transferee that the transferee 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.

(3) For emergency shipments the transferor may accept oral certification by the transferee that the transferee 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 days.

(4) The transferor may obtain other sources of information compiled by a reporting service from official records of the department, the United States nuclear regulatory commission, or the licensing agency of an agreement state or a licensing state as to the identity of licensees and the scope and expiration dates of licenses and registration.

(5) When none of the methods of verification described in paragraphs 1 and 4 are readily available or when a transferor desires to verify that information received by one of such methods is correct or up-to-date, the transferor may obtain and record confirmation from the department, the United States nuclear regulatory commission, or the licensing agency of an agreement state or a licensing state that the transferee is licensed to receive the radioactive material.

e. Preparation for shipment and transport of radioactive material shall be in accordance with the provisions of section 33-10-03-07.

~~15.~~ 13. Modification, revocation, and termination of licenses.

a. The terms and conditions of all licenses shall be subject to amendment, revision, or modification or the license may be suspended or revoked by reason of amendments to North Dakota Century Code chapter 23-20.1, or by reason of rules, regulations, and orders issued by the department.

b. 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 North Dakota Century Code chapter 23-20.1, 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 department 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 North Dakota Century Code chapter 23-20.1, or of the license, or of any rule, regulation, or order of the department.

c. Except in cases of willfulness 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.

d. The department may terminate a specific license upon request submitted by the licensee to the department in writing.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 23-20.1-04

33-10-03-06. Reciprocity.

1. Licenses of byproduct, source, and special nuclear material in quantities not sufficient to form a critical mass.

   a. Subject to this chapter, any person who holds a specific license from the United States nuclear regulatory commission or any agreement state, and issued by the agency 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 not in excess of one hundred eighty days in any calendar year provided that:

   ~~a.~~ (1) The licensing document does not limit the activity authorized by such document to specified installations or locations.

   ~~b.~~ (2) The out-of-state licensee notifies the department, in writing, at least three days prior to engaging in such activity. Such notification shall indicate the location, period, and type of proposed possession and use within the state, and shall be accompanied by a copy of the pertinent licensing document. If, for a specific case, the three-day period would impose an undue hardship on the out-of-state licensee, the licensee may, upon application to the department, obtain permission to proceed sooner. The department 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 subsection.

~~c.~~ (3) The out-of-state licensee complies with all applicable regulations of the department and with all the terms and conditions of the licensee's licensing document, except any such terms and conditions which may be inconsistent with applicable regulations of the department.

~~d.~~ (4) The out-of-state licensee supplies such other information as the department may request.

~~e.~~ (5) The out-of-state licensee shall not transfer or dispose of radioactive material possessed or used under the general license provided in this subsection except by transfer to a person:

~~(1)~~ (a) Specifically licensed by the department or the United States nuclear regulatory commission to receive such material; or

~~(2)~~ (b) Exempt from the requirements for a license for such material under subdivision a of subsection 2 of section 33-10-03-02.

~~2.~~ b. Notwithstanding the provisions of subsection 1, any person who holds a specific license 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 paragraph 1 of subdivision d of subsection 2 of section 33-10-03-04 within areas subject to the jurisdiction of the licensing body is hereby granted a general license to install, transfer, demonstrate or service such a device in this state provided that:

~~a.~~ (1) The person shall file a report with the department within thirty days after the end of each calendar quarter in which any device is transferred to or installed in this state. Each report shall identify each general licensee to whom the device is transferred by name and address, the type of device transferred, and the quantity and type of radioactive material contained in the device.

~~b.~~ (2) The device has been manufactured, labeled, installed, and serviced in accordance with applicable provisions of the specific license issued to the person by the United States nuclear regulatory commission or an agreement state.

~~e.~~ (3) The 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.~~ (4) The holder of the specific license shall furnish to each general licensee to whom the holder transfers such device or on whose premises the holder installs such device a copy of the general license contained in subdivision d of subsection 2 of section 33-10-03-04.

~~3.~~ c. The department 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 or property.

2. Licenses of naturally occurring and accelerator-produced radioactive material.

a. Subject to this chapter, any person who holds a specific license from the United States nuclear regulatory commission or any licensing state, and issued by the agency 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 not in excess of one hundred eighty days in any calendar year provided that:

(1) The licensing document does not limit the activity authorized by such document to specified installations or locations.

(2) The out-of-state licensee notifies the department in writing at least three days prior to engaging in such activity. Such notification shall indicate the location, period, and type of proposed possession and use within the state, and shall be accompanied by a copy of the pertinent licensing document. If, for a specific case, the three-day period would impose an undue hardship on the out-of-state licensee, the licensee may, upon application to the department, obtain permission to proceed sooner. The department 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 subsection.

(3) The out-of-state licensee complies with all applicable regulations of the department and with all terms and conditions of the licensing document, except any such terms and conditions which may be inconsistent with applicable regulations of the department.

(4) The out-of-state licensee supplies such other information as the department may request.

(5) The out-of-state licensee may not transfer or dispose of radioactive material possessed or used under the general license provided in this subsection except by transfer to a person:

(a) Specifically licensed by the department or by the United States nuclear regulatory commission or another licensing state to receive such material; or

(b) Exempt from the requirements for a license for such material under this subsection.

b. Notwithstanding the provisions of this subsection, any person who holds a specific license issued by the United States nuclear regulatory commission, a licensing state authorizing the holder to manufacture, transfer, install, or service a device described in paragraph 1 within areas subject to the jurisdiction of the licensing body is hereby granted a general license to install, transfer, demonstrate, or service such a device in this state provided that:

(1) Such person shall file a report with the department within thirty days after the end of each calendar quarter in which any device is transferred to or installed in this state. Each such report shall identify each general licensee to whom such device is transferred by name and address, the type of device transferred, and the quantity and type of radioactive material contained in the device.

(2) The device has been manufactured, labeled, installed, and serviced in accordance with applicable provisions of the specific license issued to such person by the United States nuclear regulatory commission or a licensing state.

(3) 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".

(4) The holder of the specific license shall furnish to each general licensee to whom the holder transfers such device or on whose premises the holder installs such device a copy of the general license contained in this subdivision.

c. The department 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 or property.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-03-07. Transportation.

~~1. No licensee shall deliver any radioactive material to a carrier for transport, unless all of the following are met:~~

~~a. The licensee complies with the applicable requirements of the regulations, appropriate to the mode of transport, of the United States department of transportation insofar as such regulations relate to the packing of radioactive material, and to the monitoring, marking and labeling of those packages.~~

~~b. The licensee has established 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.~~

~~c. 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 available to the consignee.~~

~~(For the purpose of this section, a licensee who transports the licensee's own licensed material as a private carrier is considered to have~~

~~delivered such material to a carrier for transport.)~~

~~2. Subsection 1 shall not apply to the transportation of licensed material, or to the delivery of licensed material to a carrier for transport, where such transportation is subject to the regulations of the department of transportation or the United States postal service.~~

1. No person may deliver radioactive material to a carrier for transport or transport radioactive material except as authorized in a general or specific license issued by the department or as exempted in the following:

   a. Common and contract carriers, freight forwarders, and warehousemen who are subject to the rules and regulations of the United States department of transportation in 49 CFR 170 through 189 or the United States postal service in the postal service manual (domestic mail manual), section 124.3 incorporated by reference, 39 CFR 111.11 (1974) are exempt from this article 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 rules and regulations of the United States department of transportation or United States postal service are subject to C.100 and other applicable sections of this article.

   b. Physicians, as defined in section 33-10-01-04, are exempt from the requirements of subsection 1 to the extent that they transport radioactive material for use in the practice of medicine.

   c. Any licensee is exempt from subsection 1 to the extent that the licensee delivers to a carrier for transport packages each of which contains no radioactive material having a specific activity in excess of two-thousandths microcurie per gram.

   d. Any licensee who delivers radioactive material to a carrier for transport, where such transport is subject to the regulations of the United States postal service, is exempt from the provisions of subsection 1.

2. a. A general license is hereby issued to any common or contract carrier to receive, possess, transport, and store radioactive material in the regular course of carriage for another or storage is in accordance with the applicable requirements of the regulations, appropriate to the mode of transport, of the United States department of transportation insofar as such regulations relate to the loading and storage of packages, placarding of the

transporting vehicle, and incident reporting. (Any notification of incidents referred to in these requirements shall be filed with, or made to, the department.)

b. 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 United States department of transportation insofar as such regulations relate to the loading and storage of packages, placarding of the transporting vehicle, and incident reporting. (Any notification of incidents referred to in these requirements shall be filed with, or made to, the department.)

c. Persons who transport radioactive material pursuant to the general licenses in subdivision a or b are exempt from the requirements of chapters 33-10-04 and 33-10-10 to the extent that they transport radioactive material.

3. A general license is hereby issued to deliver radioactive material to a carrier for transport provided that:

a. The licensee complies with the applicable requirements of the regulations, appropriate to the mode of transport, of the United States department of transportation insofar as such regulations relate to the packaging of radioactive material, and to the monitoring, marking, and labeling of those packages.

b. The licensee has established 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 closed for transport.

c. 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. (For the purpose of this section, a licensee who transports one's own licensed material as a private carrier is considered to have delivered such material to a carrier for transport.)

4. For the purpose of this section "nuclear waste" means any large quantity of source, byproduct, or special nuclear material required to be in Type B packaging while transported to, through or across state boundaries to a disposal site, or to a collection point for transport to a disposal site.

a. 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.

b. Each advance notification required by subdivision a must contain the following information:

(1) The name, address, and telephone number of the shipper, carrier, and receiver of the shipment.

(2) A description of the nuclear waste contained in the shipment as required by the regulations of the United States department of transportation in 49 CFR 172.202 and 172.203(d).

(3) The point of origin of the shipment and the seven-day period during which departure of the shipment is estimated to occur.

(4) The seven-day period during which arrival of the shipment at state boundaries is estimated to occur.

(5) The destination of the shipment, and the seven-day period during which arrival of the shipment is estimated to occur.

(6) A point of contact with a telephone number for current shipment information.

c. The notification required by subdivision a shall be made in writing to the office of each appropriate governor (or governor's designee) and to the department. A notification delivered by mail must be postmarked at least seven days before the beginning of the seven-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 days before the beginning of the seven-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 year.

d. The licensee shall notify each appropriate governor (or governor's designee) and the department of any changes to schedule information provided pursuant to subdivision a. 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 year a record of the name of the individual contacted.

e. 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 department. A copy of the notice shall be retained by the licensee for one year.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

SCHEDULE B
EXEMPT QUANTITIES

Radioactive Material	Microcuries
Americium-241 (Am 241)	0.05
Antimony-122 (Sb 122)	100
Antimony-124 (Sb 124)	10
Antimony-125 (Sb 125)	10
Arsenic-73 (As 73)	100
Arsenic-74 (As 74)	10
Arsenic-76 (As 76)	10
Arsenic-77 (As 77)	100
Barium-131 (Ba 131)	10
Barium-133 (Ba 133)	10
Barium-140 (Ba 140)	10
Bismuth-210 (Bi 210)	1
Bromine-82 (Br 82)	10
Cadmium-109 (Cd 109)	10
Cadmium-115m (Cd 115m)	10
Cadmium-115 (Cd 115)	100
Calcium-45 (Ca 45)	10
Calcium-47 (Ca 47)	10
Carbon-14 (C 14)	100
Cerium-141 (Ce 141)	100
Cerium-143 (Ce 143)	100
Cerium-144 (Ce 144)	1
Cesium-129 (Cs 129)	100
Cesium-131 (Cs 131)	1,000
Cesium-134m (Cs 134m)	100
Cesium-134 (Cs 134)	1
Cesium-135 (Cs 135)	10
Cesium-136 (Cs 136)	10
Cesium-137 (Cs 137)	10
Chlorine-36 (Cl 36)	10

Chlorine-38 (Cl 38)	10
Chromium-51 (Cr 51)	1,000
Cobalt-57 (Co 57)	100
Cobalt-58m (Co 58m)	10
Cobalt-58 (Co 58)	10
Cobalt-60 (Co 60)	1
Copper-64 (Cu 64)	100
Dysprosium-165 (Dy 165)	10
Dysprosium-166 (Dy 166)	100
Erbium-169 (Er 169)	100
Erbium-171 (Er 171)	100
Europium-152 (Eu 152)9.2h	100

Radioactive Material	Microcuries
Europium-152 (Eu 152)13 yr	1
Europium-154 (Eu 154)	1
Europium-155 (Eu 155)	10
Fluorine-18 (F 18)	1,000
Gadolinium-153 (Gd 153)	10
Gadolinium-159 (Gd 159)	100
Gallium-67 (Ga 67)	100
Gallium-72 (Ga 72)	10
Germanium-71 (Ge 71)	100
Gold-198 (Au 198)	100
Gold-199 (Au 199)	100
Hafnium-181 (Hf 181)	10
Holmium-166 (Ho 166)	100
Hydrogen-3 (H 3)	1,000
Indium-111 (In 111)	100
Indium-113m (In 113m)	100
Indium-114m (In 114m)	10
Indium-115m (In 115m)	100
Indium-115 (In 115)	10
Iodine-123 (I 123)	100
Iodine-125 (I 125)	1
Iodine-126 (I 126)	1
Iodine-129 (I 129)	0.1
Iodine-131 (I 131)	1
Iodine-132 (I 132)	10
Iodine-133 (I 133)	1
Iodine-134 (I 134)	10
Iodine-135 (I 135)	10
Iridium-192 (Ir 192)	10
Iridium-194 (Ir 194)	100
Iron-52 (Fe 52)	10
Iron-55 (Fe 55)	100
Iron-59 (Fe 59)	10
Krypton-85 (Kr 85)	100
Krypton-87 (Kr 87)	10

Lanthanum-140 (La 140)	10
Lutetium-177 (Lu 177)	100
Manganese-52 (Mn 52)	10
Manganese-54 (Mn 54)	10
Manganese-56 (Mn 56)	10
Mercury-197m (Hg 197m)	100
Mercury-197 (Hg 197)	100
Mercury-203 (Hg 203)	10
Molybdenum-99 (Mo 99)	100
Neodymium-147 (Nd 147)	100
Neodymium-149 (Nd 149)	100
Nickel-59 (Ni 59)	100

Radioactive Material	Microcuries
Nickel-63 (Ni 63)	10
Nickel-65 (Ni 65)	100
Niobium-93m (Nb 93m)	10
Niobium-95 (Nb 95)	10
Niobium-97 (Nb 97)	10
Osmium-185 (Os 185)	10
Osmium-191m (Os 191m)	100
Osmium-191 (Os 191)	100
Osmium-193 (Os 193)	100
Palladium-103 (Pd 103)	100
Palladium-109 (Pd 109)	100
Phosphorus-32 (P 32)	10
Platinum-191 (Pt 191)	100
Platinum-193m (Pt 193m)	100
Platinum-193 (Pt 193)	100
Platinum-197m (Pt 197m)	100
Platinum-197 (Pt 197)	100
Polonium-210 (Po 210)	0.1
Potassium-42 (K 42)	10
Potassium-43 (K 43)	10
Praseodymium-142 (Pr 142)	100
Praseodymium-143 (Pr 143)	100
Promethium-147 (Pm 147)	10
Promethium-149 (Pm 149)	10
Rhenium-186 (Re 186)	100
Rhenium-188 (Re 188)	100
Rhodium-103m (Rh 103m)	100
Rhodium-105 (Rh 105)	100
Rubidium-81 (Rb 81)	10
Rubidium-86 (Rb 86)	10
Rubidium-87 (Rb 87)	10
Ruthenium-97 (Ru 97)	100
Ruthenium-103 (Ru 103)	10
Ruthenium-105 (Ru 105)	10
Ruthenium-106 (Ru 106)	1

Samarium-151 (Sm 151)	10
Samarium-153 (Sm 153)	100
Scandium-46 (Sc 46)	10
Scandium-47 (Sc 47)	100
Scandium-48 (Sc 48)	10
Selenium-75 (Se 75)	10
Silicon-31 (Si 31)	100
Silver-105 (Ag 105)	10
Silver-110m (Ag 110m)	1
Silver-111 (Ag 111)	100
Sodium-22 (Na 22)	10
Sodium-24 (Na 24)	10

Radioactive Material	Microcuries
Strontium-85 (Sr 85)	10
Strontium-89 (Sr 89)	1
Strontium-90 (Sr 90)	0.1
Strontium-91 (Sr 91)	10
Strontium-92 (Sr 92)	10
Sulphur-35 (S 35)	100
Tantalum-182 (Ta 182)	10
Technetium-96 (Tc 96)	10
Technetium-97m (Tc 97m)	100
Technetium-97 (Tc 97)	100
Technetium-99m (Tc 99m)	100
Technetium-99 (Tc 99)	10
Tellurium-125m (Te 125m)	10
Tellurium-127m (Te 127m)	10
Tellurium-127 (Te 127)	100
Tellurium-129m (Te 129m)	10
Tellurium-129 (Te 129)	100
Tellurium-131m (Te 131m)	10
Tellurium-132 (Te 132)	10
Terbium-160 (Tb 160)	10
Thallium-200 (Tl 200)	100
Thallium-201 (Tl 201)	100
Thallium-202 (Tl 202)	100
Thallium-204 (Tl 204)	10
Thulium-170 (Tm 170)	10
Thulium-171 (Tm 171)	10
Tin-113 (Sn 113)	10
Tin-125 (Sn 125)	10
Tungsten-181 (W 181)	10
Tungsten-185 (W 185)	10
Tungsten-187 (W 187)	100
Vanadium-48 (V 48)	10
Xenon-131m (Xe 131m)	1,000
Xenon-133 (Xe 133)	100
Xenon-135 (Xe 135)	100

Ytterbium-175 (Yb 175)	100
Yttrium-87 (Y 87)	10
Yttrium-90 (Y 90)	10
Yttrium-91 (Y 91)	10
Yttrium-92 (Y 92)	100
Yttrium-93 (Y-93)	100
Zinc-65 (Zn 65)	10
Zinc-69m (Zn 69m)	100
Zinc-69 (Zn 69)	1,000
Zirconium-93 (Zr 93)	10
Zirconium-95 (Zr 95)	10
Zirconium-97 (Zr 97)	10

Radioactive Material	Microcuries
Any radioactive material not listed above other than alpha emitting radioactive material	0.1

Note: For purposes of subdivision e of subsection 2 of section 33-10-03-05 where there is involved a combination of isotopes, the limit for the combination should be derived as follows:

Determine the amount of each isotope possessed and 1,000 times the amount in Schedule B for each of those isotopes when not in combination. The sum of the ratios of those quantities may not exceed one (i.e., unity).

Example:

$$\frac{\text{Amt. of Isotope A possessed}}{\text{1000 x Schedule B quantity for Isotope A}} + \frac{\text{Amt. of Isotope B possessed}}{\text{1000 x Schedule B quantity for Isotope B}} \leq 1$$

History: Amended effective October 1, 1982.

SCHEDULE C
GROUPS OF MEDICAL USES OF RADIOACTIVE MATERIAL

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 and tumor localizations.

(1) Iodine-131 as sodium iodide ($Na^{131}I$) for measurement of thyroid uptake;

(2) Iodine-125 as sodium iodine ($Na^{125}I$) for measurement of thyroid uptake;

(3) Iodine-131 as iodinated human serum albumin (IHSA) for determinations of blood and blood plasma volume and for studies of cardiovascular function and protein turnover;

(4) Iodine-125 as iodinated human serum albumin (IHSA) for determination of blood and blood plasma volume and for studies of cardiovascular function and protein turnover;

(5) Iodine-131 as labeled rose bengal for liver function studies;

(6) Iodine-125 as labeled rose bengal for liver function studies;

(7) Iodine-131 as labeled fats or fatty acids for fat absorption studies;

(8) Iodine-125 as labeled fats or fatty acids for fat absorption studies;

(9) Iodine-131 as labeled iodopyracet, sodium iodohippurate, sodium diatrizoate, diatrizoate methylglucamine, sodium diprotrizoate, sodium acetrizoate, or sodium iothalamate for kidney function studies;

(10) Iodine-125 as labeled iodopyracet, sodium iodohippurate, sodium diatrizoate; diatrizoate methylglucamine, sodium diprotrizoate, sodium acetrizoate, or sodium iothalamate for kidney function studies;

(11) Cobalt-57 as labeled cyanocobalamin for intestional absorption studies;

(12) Cobalt-58 as labeled cyanocobalamin for intestinal absorption studies;

(13) Cobalt-60 as labeled cyanocobalamin for intestinal absorption studies;

(14) Chromium-51 as sodium chromate for determination of red blood cell volume and studies of red blood cell survival time and gastrointestinal blood loss;

(15) Chromium-51 as labeled human serum albumin for gastrointestinal protein loss studies;

(16) Iron-59 as chloride, citrate, or sulfate for iron turnover studies;

(17) Potassium-42 as chloride for potassium space determination;

(18) Sodium-24 as chloride for sodium space determinations;

(19) Technetium-99m as pertechnetate for blood flow studies;

(20) Mercury as chlormerodrin for kidney function studies;

(21) 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).

(22) Iodine-123 as sodium iodide (NaI) for measurement of thyroid uptake.

GROUP II. Use of prepared radiopharmaceuticals for diagnostic studies involving imaging and tumor localizations.

(1) Iodine-131 as sodium iodide for thyroid imaging;

(2) Iodine-125 as sodium iodide for thyroid imaging;

(3) Iodine-131 as iodinated human serum albumin (IHSA) for brain tumor localizations and cardiac imaging;

(4) Iodine-131 as macroaggregated iodinated human serum albumin for lung imaging;

(5) Iodine-131 as colloidal (microaggregated) iodinated human serum albumin for liver imaging;

(6) Iodine-131 as labeled rose bengal for liver imaging;

(7) Iodine-131 as iodopyracet, sodium iodohippurate, sodium diatrizoate, diatrizoate methlyglucamine, sodium diprotrizoate, or sodium acetrizoate for kidney imaging;

(8) Iodine-131 as sodium iodipamide for cardiac imaging;

(9) Iodine-131 as iodinated human serum albumin (IHSA) for placenta localization;

(10) Chromium-51 as sodium chromate for spleen imaging;

(11) Chromium-51 as labeled human serum albumin for placenta localization;

(12) Gold-198 in colloidal form for liver imaging;

(13) Mercury-197 as labeled chlormerodrin for kidney and brain imaging;

(14) Mercury-203 as labeled chlormerodrin for brain imaging;

(15) Selenium-75 as labeled selenomethionine for pancreas imaging;

(16) Strontium-85 as nitrate or chloride for bone imaging in patients with suspected or diagnosed cancer;

(17) Technetium-99m as pertechnetate for brain imaging;

(18) Technetium-99m as pertechnetate for thyroid imaging;

(19) Technetium-99m as pertechnetate for salivary gland imaging;

(20) Technetium-99m as pertechnetate for blood pool imaging, including placenta localization;

(21) Technetium-99m as labeled sulfur colloid for liver, spleen, and bone marrow imaging;

(22) Technetium-99m as labeled macroaggregated human serum albumin for lung imaging;

(23) Any radioactive material in a radiopharmaceutical prepared from a reagent kit listed in Section (4) of Group III;

(24) Flourine-18 in solution for bone imaging;

(25) Strontium-87m for bone imaging;

(26) Any radioactive material in a radiopharmaceutical and for a diagnostic use involving imaging for which a "Notice of Claimed Investigational Exemption for a New Drug" (IND) has been accepted by the Food and Drug Administration (FDA);

(27) Ytterbium-169 as labeled diethylenetriamine penta-acetic acid (DTPA) for cisternography;

(28) Iodine-125 as fibrinogen for detection and monitoring of developing deep vein thrombosis;

(29) Iodine-123 as sodium iodide (NaI) for thyroid imaging;

(30) Indium-113m as chloride for blood pool imaging, including placenta localization;

(31) Gallium-67 as citrate for soft tissue tumor, liver tumor, and inflammatory lesion imaging;

GROUP III. Use of generators and reagent kits for the preparation and use of radiopharmaceuticals containing radioactive material for certain diagnostic uses.

(1) Molybdenum-99/technetium-99m generators for the elution of technetium-99m as pertechnetate for:

(i) Brain imaging;

(ii) Thyroid imaging;

(iii) Salivary gland imaging;

(iv) Blood pool imaging including placenta localization;

(v) Blood flow studies;

(vi) Use with reagent kits for preparation and use of radiopharmaceuticals containing technetium 99m as provided in Sections (4) and (5) of this group.

(2) Yttrium-87/strontium-87m generators for the elution of strontium-87m for bone imaging.

(3) Technetium-99m as pertechnetate for use with reagent kits for preparation and use of radiopharmaceuticals containing technetium-99m as provided in Sections (4) and (5) of this group.

(4) Reagent kits for preparation of technetium-99m labeled:

(i) Sulfur colloid for liver, spleen, and bone marrow imaging;

(ii) Iron-ascorbate-diethylenetriamine penta-acetic acid complex for kidney imaging;

(iii) Diethylenetriamine penta-acetic acid (Sn) for kidney imaging and kidney function studies;

(iv) Diethylenetriamine penta-acetic acid (Sn) for brain imaging;

(v) Human serum albumin microspheres for lung imaging;

(iv) Polyphosphates for bone imaging;

(vii) Macroaggregated human serum albumin for lung imaging;

(viii) Distannous etidronate complex for bone imaging; and

(ix) Stannous phyrophosphate for bone and cardiac imaging;

(x) Human serum albumin for heart blood pool imaging;

(xi) Medronite sodium for bone imaging; and

(xiii) Disofenin for hepatobiliary imaging.

(5) Tin-113/indium-113m generators for the elution of indium-113m as chloride for:

(i) Blood pool imaging including placenta localization.

(6) 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).

GROUP IV. Use of prepared radiopharmaceuticals for certain therapeutic uses that do not normally require hospitalization for purposes of radiation safety:

(1) Iodine-131 as iodide for treatment of hyperthyroidism and cardiac dysfunction;

(2) Phosphorus-32 as soluble phosphate for treatment of polycythemia vera, leukemia, and bone metastases;

(3) Phosphorus-32 as colloidal chromic phosphate for intracavitary treatment of malignant effusions;

(4) Any radioactive material in a radiopharmaceutical and for a therapeutic use not normally requiring hospitalization for purposes of radiation safety for which a "Notice of Claimed Investigational Exemption for a New Drug" (IND) has been accepted by the Food and Drug Administration (FDA).

GROUP V. Use of prepared radiopharmaceuticals for certain therapeutic uses that normally require hospitalization for purposes of radiation safety:

(1) Gold-198 as colloid for intracavitary treatment of malignant effusions;

(2) Iodine-131 as iodide for treatment of thyroid carcinoma;

(3) Any radioactive material in a radiopharmaceutical and for a therapeutic use normally requiring hospitalization for radiation safety reasons for which a "Notice of Claimed Investigational Exemption for a New Drug" (IND) has been accepted by the Food and Drug Administration (FDA).

GROUP VI. Use of sources and devices containing radioactive material for certain medical uses.

(1) Americium-241 as a sealed source in a device for bone mineral analysis;

(2) Cesium-137 encased in needles and applicator cells for topical, interstitial, and intracavitary treatment of cancer;

(3) Cobalt-60 encased in needles and applicator cells for topical, interstitial, and intracavitary treatment of cancer;

(4) Gold-198 as seeds for interstitial treatment of cancer;

(5) Iodine-125 as a sealed source in a device for bone mineral analysis;

(6) Iridium-192 as seeds encased in nylon ribbon for interstitial treatment of cancer;

(7) Strontium-90 sealed in an applicator for treatment of superficial eye conditions;

(8) Radon-222 as seeds for topical, interstitial, intracavitary treatment of cancer;

(9) Radium-226 as a sealed source for topical, interstitial, intracavitary treatment of cancer; and

(10) Iodine-125 as seeds for interstitial treatment of cancer.

History: Amended effective October 1, 1982.

SCHEDULE E
CRITERIA RELATED TO THE DISPOSITION OF URANIUM MILL TAILINGS OR WASTES

INTRODUCTION - As required by paragraph 6 of subdivision n of subsection 5 of section 33-10-03-05, each applicant for a license to possess and use source material in conjunction with uranium or thorium milling, or byproduct material at sites formerly associated with such milling, is required to include in a license application proposed specifications relating to milling operations and the disposition of tailings or waste resulting from such milling activities. This schedule establishes technical, financial, ownership, and long-term site surveillance criteria relating to the siting, operation, decontamination, decommissioning, and reclamation of mills and tailings or waste systems and sites at which such mills and systems are located. As used in this schedule the term "as low as is reasonably achievable" has the same meaning as in subsection 2 of section 33-10-04-01.

In many cases, flexibility is provided in the criteria to allow achieving an optimum tailings disposal program on a site specific basis. However, in such cases the objectives, technical alternatives, and concerns which must be taken into account in developing a tailings program are identified. Applications for licenses must clearly demonstrate how the criteria have been addressed.

The specifications shall be developed considering the expected full capacity of tailings or waste systems and the lifetime of mill operations. Where later expansions of systems or operations may be likely (for example, where large quantities of ore now marginally uneconomical may be stockpiled), the amendability of the disposal system to accommodate increased capacities without degradation in long-term stability and other performance factors shall be evaluated.

Detailed programs meeting the technical and financial criteria in this schedule including appropriate supporting data, analyses, and

alternatives, shall be developed by existing uranium milling licensees and filed, in connection with license renewal applications or within nine months from the effective date of this schedule whichever occurs first.

CRITERION 1 - In selecting among alternative tailings disposal sites or judging the adequacy of existing tailings sites, the following site features, which will determine the extent to which a program meets the broad objective of isolating the tailings and associated contaminants from man and the environment during operations and for thousands of years thereafter without ongoing active maintenance, shall be considered:

- remoteness from populated areas;
- hydrologic and other natural conditions as they contribute to continued immobilization and isolation of contaminants from usable ground water sources; and
- potential of minimizing erosion, disturbance, and dispersion by natural forces over the long term.

The site selection process shall be an optimization to the maximum extent reasonably achievable in terms of these features.

In the selection of disposal sites, primary emphasis shall be given to isolation of tailings or wastes, a matter having long-term impacts, as opposed to consideration only of short-term convenience or benefits, such as minimization of transportation or land acquisition costs. While isolation of tailings will be a function of both site characteristics and engineering design, overriding consideration shall be given to siting features given the long-term nature of the tailings hazards.

Tailings shall be disposed of in a manner such that no active maintenance is required to preserve the condition of the site.

CRITERION 2 - To avoid proliferation of small waste disposal sites, byproduct material from in-site extraction operations, such as residues from solution evaporation or contaminated control processes, and wastes from small remote aboveground extraction operations shall preferably be disposed of at existing large mill tailings disposal sites; unless, considering the nature of the wastes, such as their volume and specific activity and the costs and environmental impacts of transporting the wastes to a large disposal site, such offsite disposal is demonstrated to be impracticable or the advantages of onsite burial clearly outweigh the benefits of reducing the perpetual surveillance obligations.

CRITERION 3 - The "prime option" for disposal of tailings is placement below grade, either in mines or specially excavated pits (that is, when the need for any specially constructed retention structure is eliminated). The evaluation of alternative sites and disposal methods performed by mill operators in support of their proposed tailings disposal program (provided in applicants' environmental reports) shall

reflect serious consideration of this disposal mode. In some instances, below-grade disposal may not be the most environmentally sound approach, such as might be the case if a high quality ground water formation is relatively close to the surface or not very well isolated by overlying soils and rock. Also, geologic topographic conditions might make full, below-grade burial impracticable; for example, bedrock may be sufficiently near the surface that blasting would be required to excavate a disposal pit at excessive cost, and more suitable alternate sites are not available. Where full below-grade burial is not practicable, the size of retention structures, and size and steepness of slopes of associated exposed embankments, shall be minimized by excavation to the maximum extent reasonably achievable or appropriate given the geologic and hydrogeologic conditions at a site. In these cases, it must be demonstrated that an above-grade disposal program will provide reasonably equivalent isolation of the tailings from natural erosional forces.

CRITERION 4 - The following site and design criteria shall be adhered to whether tailings or wastes are disposed of above or below grade:

(a) Upstream rainfall catchment areas must be minimized to decrease erosion potential and the size of the maximum possible flood which could erode or wash out sections of the tailings disposal area.

(b) Topographic features shall provide good wind protection.

(c) Embankment and cover slopes shall be relatively flat after final stabilization to minimize erosion potential and to provide conservative factors of safety assuring long-term stability. The broad objective should be to contour final slopes to grades which are as close as possible to those which would be provided if tailings were disposed of below grade; this could, for example, lead to slopes of about ten horizontal to one vertical (10h:1v) or less steep. In general, slopes should not be steeper than about 5h:1v. Where steeper slopes are proposed, reasons why a slope less steep than 5h:1v would be impracticable should be provided, and compensating factors and conditions which make such slopes acceptable should be identified.

(d) A full self-sustaining vegetative cover shall be established or rock cover employed to reduce wind and water erosion to negligible levels.

Where a full vegetative cover is not likely to be self-sustaining due to climatic conditions, such as in semiarid and arid regions, rock cover shall be employed on slopes of the impoundment system. The staff will consider relaxing this requirement for extremely gentle slopes such as those which may exist on the top of the pile.

The following factors shall be considered in establishing the final rock cover design to avoid displacement of rock particles by human and animal traffic or by natural processes, and to preclude undercutting and piping:

. shape, size, composition, gradation of rock particles (excepting bedding material, average particle size shall be at least cobble size or greater);

. rock cover thickness and zoning of particle by size; and

. steepness of underlying slopes.

Individual rock fragments shall be dense, sound, and resistant to abrasion, and shall be free from cracks, seams, and other defects that would tend to unduly increase their destruction by water and frost actions. Weak, friable, or laminated aggregate shall not be used. Shale, rock, laminated with shale, and cherts shall not be used.

Rock covering of slopes may not be required where top covers are very thick (on the order of eighteen meters or greater); impoundment slopes are very gentle (on the order of 10h:1v or less); bulk cover materials have inherently favorable erosion resistance characteristics; and there is negligible drainage catchment area upstream of the pile, and there is good wind protection as described in points (a) and (b) of this criterion.

Furthermore, all impoundment surfaces shall be contoured to avoid areas of concentrated surface runoff or abrupt or sharp changes in slope gradient. In addition to rock cover on slopes, areas toward which surface runoff might be directed shall be well protected with substantial rock cover (riprap). In addition to providing for stability of the impoundment systems itself, overall stability, erosion potential, and geomorphology of surrounding terrain shall be evaluated to assure that there are no ongoing or potential processes, such as gully erosion, which would lead to impoundment instability.

(e) The impoundment shall not be located near a capable fault that could cause a maximum credible earthquake larger than that which the impoundment could reasonably be expected to withstand. As used in this criterion, the term "capable fault" has the same meaning as defined in Section III (g) of Appendix A of 10 CFR part 100. The term "maximum credible earthquake" means that earthquake which would cause the maximum vibratory ground motion based upon an evaluation of earthquake potential considering the regional and local geology and seismology and specific characteristics of local subsurface material.

(f) The impoundment, where feasible, should be designed to incorporate features which will promote deposition. For example, design features which promote deposition of sediment suspended in any runoff which flows into the impoundment area might be utilized; the object of such a design feature would be to enhance the thickness of cover over time.

CRITERION 5 - Steps shall be taken to reduce seepage of toxic materials into ground water to the maximum extent reasonably achievable. Any seepage which does occur shall not result in deterioration of existing ground water supplies from their current or potential use. The following shall be considered to accomplish this:

. installation of low permeability bottom liners (where synthetic liners are used, a leakage detection system shall be installed immediately below the liner to ensure major failures are detected if they occur. This is in addition to the ground water monitoring program conducted as provided in Criterion 7. Where clay liners are proposed or relatively thin in-site clay soils are to be relied upon for seepage control, tests shall be conducted with representative tailings solutions and clay materials to confirm that no significant deterioration of permeability or stability properties will occur with continuous exposure of clay to tailings solutions. Tests shall be run for a sufficient period of time to reveal any effects if they are going to occur (in some cases, deterioration has been observed to occur rather rapidly after about nine months of exposure).

. mill process design which provides the maximum practicable recycle of solutions and conservation of water to reduce the net input of liquid to the tailings impoundment.

. dewatering of tailings by process devices or in-situ drainage system. At new sites, tailings shall be dewatered by a drainage system installed at the bottom of the impoundment to lower the phreatic surface and reduce the driving head for seepage, unless tests show tailings are not amenable to such a system. Where in-situ dewatering is to be conducted, the impoundment bottom shall be graded to assure that the drains are at a low point. The drains shall be protected by suitable filter materials to assure that drains remain free running. The drainage system shall also be adequately sized to assure good drainage.

. neutralization to promote immobilization of toxic substances.

Where ground water impacts are occurring at an existing site due to seepage, action shall be taken to alleviate conditions that lead to excessive seepage impacts and restore ground water quality to its potential use before milling operations began to the maximum extent practicable. The specific seepage control and ground water protection method, or combination of methods, to be used must be worked out on a

site-specific basis. Technical specifications shall be prepared to control installation of seepage control systems. A quality assurance, testing and inspection program, which includes supervision by a qualified engineer or geologist, shall be established to assure that specification is met.

While the primary method of protecting ground water shall be isolation of tailings and tailings solutions, disposal involving contact with ground water will be considered provided supporting tests and analysis are presented demonstrating that the proposed disposal and treatment methods will not degrade ground water from current or potential uses.

Furthermore, steps shall be taken during stockpiling of ore to minimize penetration of radionuclides into underlying soils; suitable methods include lining or compaction of ore storage areas.

In support of a tailings disposal system proposal, the applicant/operator shall supply information concerning the following:

. The chemical and radioactive characteristics of the waste solutions.

. The characteristics of the underlying soil and geologic formations particularly the extent to which they will control transport of contaminants and solutions. This shall include detailed information concerning extent, thickness, uniformity, shape, and orientation of underlying strata. Hydraulic gradients and conductivities of the various formations shall be determined.

  This information shall be gathered by borings and field survey methods taken within the proposed impoundment area and in surrounding areas where contaminants might migrate to usable ground water. The information gathered on boreholes shall include both geologic and geophysical logs in sufficient number and degree of sophistication to allow determining significant discontinuities, fractures, and channeled deposits which are of high hydraulic conductivity. If field survey methods are used, they should be in addition to and calibrated with borehole logging. Hydrologic parameters such as permeability shall not be determined on the basis of laboratory analysis of samples alone; a sufficient amount of field testing, e.g., pump tests, shall be conducted to assure actual field properties are adequately understood. Testing shall be conducted to allow estimating chemi-sorption attenuation properties of underlying soil and rock.

. Location, extent, quality, and capacity of any ground water at and near the site.

CRITERION 6 - Sufficient earth cover, but not less than three meters, shall be placed over tailings or wastes at the end of milling operations to result in a calculated reduction in surface exhalation of radon

emanating from the tailings or wastes to less than two picocuries per square meter per second. In computing required tailings cover thickness, moisture in soils in excess of amounts found normally in similar soils in similar circumstances shall not be considered. Direct gamma exposure from the tailings or wastes should be reduced to background levels. The effects of any thin synthetic layer shall not be taken into account in determining the calculated radon exhalation level. If nonsoil materials are proposed to reduce tailings covers to less than three meters, it must be demonstrated that such materials will not crack or degrade by differential settlement, weathering, or other mechanism over long-term time intervals. Near surface materials, i.e., within the top three meters, shall not include mine waste or rock that contains elevated levels of radium; soils used for near surface cover must be essentially the same, as far as radioactivity is concerned, as that of surrounding soils.

CRITERION 7 - Milling operations shall be conducted so that all airborne effluent releases are reduced to as low as is reasonably achievable. The primary means of accomplishing this shall be by means of emission controls. Institutional controls, such as extending the site boundary and exclusion area, may be employed to ensure that offsite exposure limits are met, but only after all practicable measures have been taken to control emissions at the source. Notwithstanding the existence of individual dose standards, strict control of emissions is necessary to assure that population exposures are reduced to the maximum extent reasonably achievable and to avoid site contamination. The greatest potential sources of offsite radiation exposure (aside from radon exposure) are dusting from dry surfaces of the tailings disposal area not covered by tailings solution and emissions from yellowcake drying and packaging operations. Checks shall be made and logged hourly of all parameters, e.g., differential pressure and scrubber water flow rate, which determine the efficiency of yellowcake stack emission control equipment operation. It shall be determined whether or not conditions are within a range prescribed to ensure that the equipment is operating consistently near peak efficiency; corrective action shall be taken when performance is outside of prescribed ranges. Effluent control devices shall be operative at all times during drying and packaging operations and whenever air is exhausting from the yellowcake stack.

Drying and packaging operations shall terminate when controls are inoperative. When checks indicate the equipment is not operating within the range prescribed for peak efficiency, actions shall be taken to restore parameters to the prescribed range. When this cannot be done without shutdown and repairs, drying and packaging operations shall cease as soon as practicable.

Operations may not be restarted after cessation due to off-normal performance until needed corrective actions have been identified and implemented. All such cessations, corrective actions, and restarts shall be reported to the department in writing, within ten days of the subsequent restart.

To control dusting from tailings, that portion not covered by standing liquids shall be wetted or chemically stabilized to prevent or minimize blowing and dusting to the maximum extent reasonably achievable. This requirement may be relaxed if tailings are effectively sheltered from wind, such as may be the case where they are disposed of below grade and the tailings surface is not exposed to wind. Consideration shall be given in planning tailings disposal programs to methods which would allow phased covering and reclamation of tailings impoundments since this will help in controlling particulate and radon emissions during operation. To control dusting from diffuse sources, such as tailings and ore pads where automatic controls do not apply, operators shall develop written operating procedures specifying the methods of control which will be utilized.

CRITERION 8 - These criteria relating to ownership of tailings and their disposal sites become effective on November 8, 1981, and apply to all licenses terminated, issued, or renewed after that date.

Any uranium or thorium milling license or tailings license shall contain such terms and conditions as the United States Nuclear Regulatory Commission determines necessary to assure that prior to termination of the license, the licensee will comply with ownership requirements of this criterion for sites used for tailings disposal.

Title to the byproduct material license pursuant to subdivision n of subsection 5 of section 33-10-03-05 and land, including any interests therein (other than land owned by the United States or by a state) which is used for the disposal of any such byproduct material, or is essential to ensure the long-term stability of such disposal site, shall be transferred to the United States or the state in which such land is located, at the option of such state. In view of the fact that physical isolation must be the primary means of long-term control, and government land ownership is a desirable supplementary measure, ownership of certain severable subsurface interests, e.g., mineral rights, may be determined to be unnecessary to protect the public health and safety and the environment. In any case, however, the applicant/operator must demonstrate a serious effort to obtain such subsurface rights, and must, in the event that certain rights cannot be obtained, provide notification in local public land records of the fact that the land is being used for the disposal of radioactive material and is subject to either a United States Nuclear Regulatory Commission general or specific license prohibiting the disruption and disturbance of the tailings. In some rare cases, such as may occur with deep burial where no ongoing site surveillance will be required, surface land ownership transfer requirements may be waived. For licenses issued before November 8, 1981, the department may take into account the status of the ownership of such land, and interests therein, and the ability of a licensee to transfer title and custody thereof to the United States or the state.

If the United States Nuclear Regulatory Commission subsequent to title transfer determines that use of the surface or subsurface estates, or both, of the land transferred to the United States or to the state will not endanger the public health, safety, welfare, or environment, the

United States Nuclear Regulatory Commission may permit the use of the surface or subsurface estates, or both, of such land in a manner consistent with the provisions provided in these criteria. If the United States Nuclear Regulatory Commission permits such use of such land, it will provide the person who transferred such land with the right of first refusal with respect to such use of such land.

Material and land transferred to the United States or the state in accordance with this criterion shall be transferred without cost to the United States or the state other than administrative and legal costs incurred in carrying out such transfer.

The provisions of chapter 33-10-03 respecting transfer of title and custody to land and tailings and waste shall not apply in the case of lands held in trust by the United States for any Indian tribe or lands owned by such Indian tribe subject to a restriction against alienation imposed by the United States. In the case of such lands which are used for disposal of byproduct material, as defined in subsection 6 of section 33-10-01-04, the licensee shall enter into arrangements with the United States Nuclear Regulatory Commission as may be appropriate to assure the long-term surveillance of such lands by the United States.

History: Effective October 1, 1982.

33-10-04-01. Purpose and scope.

1. This chapter establishes standards for protection against radiation hazards. Except as otherwise specifically provided, this chapter applies to all licensees or registrants. It is the purpose of this chapter to control the possession, use, and transfer of sources of radiation by any licensee or registrant in such a manner that the total dose to an individual does not exceed the standards of radiation protection prescribed in this chapter. Nothing in this chapter shall be interpreted as limiting the intentional exposure of patients to radiation for the purpose of medical diagnosis or therapy.

2. In addition to complying with the requirements set forth in this chapter every reasonable effort should be made 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 is 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 ionizing radiation in the public interest.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-04-02. Permissible doses, levels, and concentrations.

1. Radiation dose to individuals in restricted areas. (For determining the doses specified in ~~subsection 1~~ subdivision a of this subsection a dose from x or gamma rays up to ten megaelectronvolts may be assumed to be equivalent to the exposure measured by a properly calibrated appropriate instrument in air at ~~or~~ or near the body surface in the region of the highest dose rate.)

   a. ~~Except~~ In accordance with subdivision a of subsection 2 and except as provided in subdivision b, 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 calendar quarter from all sources of radiation ~~in the licensee's or registrant's possession~~ a total occupational dose in excess of the ~~limits~~ standards specified in the following table:

	Rems per Calendar Quarter
Whole body; head and trunk; active blood-forming organs; lens of eyes; or gonads	1 1/4
Hands and forearms; feet and ankles	18 3/4
Skin of whole body	7 1/2

   b. A licensee or registrant may permit an individual in a restricted area to receive a total occupational dose to the whole body greater than that permitted under subdivision a, provided all of the following:

      (1) ~~During any calendar quarter the dose to the whole body from sources of radiation in the licensee's or registrant's possession shall not exceed three rems.~~ During any calendar quarter the total occupational dose to the whole body shall not exceed three rems.

      (2) The dose to the whole body, when added to the accumulated occupational dose to the whole body, shall not exceed 5 (N-18) rems where "N" equals the individual's age in years at the individual's last birthday.

      (3) The licensee or registrant has determined the individual's accumulated occupational dose to the

whole body on Department Form RAD 682 or on a clear and legible record containing all the information required in that form and has otherwise complied with the requirements of subsection 2. As used in this subdivision, "dose to the whole body" includes any dose to the whole body, gonads, active blood-forming organs, head and trunk, or lens of eye.

2. Determination of accumulated dose.

a. ~~This subsection contains requirements which must be satisfied by licensees or registrants who propose, pursuant to subdivision b of subsection 1 to permit individuals in a restricted area to receive exposure to radiation in excess of the limits specified in subdivision a of subsection 1.~~ Each licensee or registrant shall require any individual, prior to first entry of the individual into the licensee'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 calendar quarter an occupational dose in excess of twenty-five percent of the applicable standards specified in this subdivision and subsection 4, 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. Each licensee or registrant shall maintain records of such statements until the department authorizes their disposition.

b. Before permitting any individual in a restricted area to be exposed to radiation in excess of the limits specified in subdivision a of subsection 1, each licensee or registrant shall:

(1) Obtain a certificate on Department Form RAD 682 or on a clear and legible record containing all the information required in that form, signed by the individual, showing each period of time after the individual attained the age of eighteen in which the individual received an occupational dose of radiation.

(2) Calculate on Department Form RAD 682 in accordance with the instructions appearing therein, or on a clear and legible record containing all the information required in that form, the previously accumulated occupational dose received by the

individual and the additional dose allowed for that individual under subdivision b of subsection 1.

c. (1) In the preparation of Department Form RAD 682, or a clear and legible record containing all the information required in 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, the licensee or registrant 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 individual's 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:

Part of Body	Column 1 Assumed Dose in Rems for Calendar Quarters Prior to January 1, 1961	Column 2 Assumed Dose in Rems for Calendar Quarters Beginning on or After January 1, 1961
Whole body, gonads, active blood-forming organs, head and trunk, lens of eye	3 3/4	1 1/4

(2) The licensee or registrant shall retain and preserve records used in preparing Department Form RAD 682 until the department 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 paragraph 2 of subdivision b of subsection 1, the excess may be disregarded.

~~3. Exposure of individuals to concentrations of radioactive material in restricted areas.~~

~~a. No licensee shall possess, use, receive, or transfer radioactive material in such a manner as to cause an individual in a restricted area to be exposed to airborne radioactive material in an average concentration in excess of the limits specified in Appendix A, Table I, of this chapter. "Expose", as used in this subsection, 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 department pursuant to subdivision c.

b. The limits given in Appendix A, Table I, of this chapter are based upon exposure to the concentrations specified for forty hours in any period of seven consecutive days. In any such period where the number of hours of exposure is less than forty, 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, limits specified in the table shall be decreased proportionately.

c. (1) Except as authorized by the department pursuant to this subdivision, no allowance shall be made for particle size or the use of protective clothing or equipment in determining whether an individual is exposed to an airborne concentration in excess of the limits specified in Appendix A, Table I.

(2) The department may authorize a licensee to expose an individual in a restricted area to airborne concentrations in excess of the limits specified in Appendix A, Table I, 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 Appendix A, Table I.

(2) The department may authorize a licensee to expose an individual in a restricted area to airborne concentrations in excess of the limits specified in Appendix A, Table I, 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 Appendix A, 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 sizes.

~~(3) The department may authorize a licensee to expose an individual in a restricted area to airborne concentrations in excess of the limits specified in Appendix A, Table I, upon receipt of an application demonstrating that the individual will wear appropriate 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-hour week. Each application under this paragraph shall contain all of the following information:~~

~~(a) A description of the protective equipment to be employed, including the efficiency of the equipment for the material involved.~~

~~(b) Procedures for the fitting, maintenance, and cleaning of the protective equipment.~~

~~(c) 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 observance by the individual of the proposed procedures.~~

~~(d) The average concentrations present in the areas occupied by individuals.~~

3. Exposure of individuals to concentrations of radioactive material in restricted areas.

a. No licensee shall possess, use, or transfer radioactive material in such a manner as to permit any individual in a restricted area to inhale a quantity of radioactive material in any period of one calendar quarter greater than the quantity which would result from inhalation for forty hours per week for thirteen weeks at uniform concentrations of radioactive material in air specified in Appendix A, Table I, of this chapter. If the radioactive material is of such form that intake by absorption through the skin is likely, individual exposures to radioactive material shall be controlled so that the uptake of 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 hours per week or thirteen weeks at uniform concentrations specified in Appendix 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 Appendix A, Table I, of this chapter for forty hours per week for thirteen weeks.

For radon-222, the limiting quantity is that inhaled in a period of one 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 chapter 33-10-04. These nuclides shall be subject to the precautionary procedures required by this chapter.

Multiply the concentration values specified in Appendix A of this chapter by 6.3×10^8 ml to obtain the quarterly quantity limit. Multiply the concentration values specified in Appendix A of this chapter by 2.5×10^9 ml to obtain the annual quantity limit for Rn-222.

b. To determine compliance with subdivision a:

(1) The concentration for soluble hydrogen 3 in Table I, Column 1, of this chapter may be multiplied by 2.

(2) For radon-222, a limiting quantity is that inhaled in a period of one calendar year.

(3) For radioactive material designated "Sub" in the "Isotope" column of Table I of this chapter, the specified concentrations are based upon exposure to the radioactive material as an external source; hence, individual exposures to these radioactive materials may be accounted for as part of the limitation on individual dose in one point of this section.

(4) It shall be assumed that a person working forty hours per week inhales 6.3×10^8 ml of air during thirteen such weeks and 2.5×10^9 ml of air during one year.

c. Notwithstanding subdivision a, if radioactive material is of such form that intake by absorption through the skin is likely, individual exposures to radioactive material shall

be controlled so that the uptake of 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 hours per week for thirteen weeks at uniform concentrations specified in Appendix A, Table I, Column 1, of this chapter.

d. 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 Appendix A, Table I, Column 1, of this chapter. 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 limit specified in Appendix A, Table I, Column 1, of this chapter. (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 has been exceeded.)

e. For the purpose of determining compliance with the requirements of this section, the licensee shall use suitable measurements of concentrations of radioactive materials 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 detection and assessment of individual intakes of radioactivity 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 this subsection. When assessment of a particular individual's intake of radioactive material is necessary, intakes less than those which would result from inhalation for two hours in any one day or for ten hours in any one week at uniform concentrations specified in Appendix A, Table I, Column 1, of this chapter need not be included in such assessment, provided that for any assessment in excess of these amounts the entire amount is included.

f. The licensee shall, as a precautionary procedure, use process or other engineering controls, to the extent practicable, to limit concentrations of radioactive materials in air to levels below those which delimit an airborne radioactivity area as defined in subdivision d of subsection 3 of section 33-10-04-03. When it is impracticable to apply process or other engineering controls to limit concentrations of radioactive material in air below those defined in subdivision d of subsection 3 of section 33-10-04-03, 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 consecutive days as far below that intake of radioactive material which would result from inhalation of such material for forty hours at the uniform concentrations specified in Appendix A, Table I, Column 1, of this chapter as is reasonably achievable. Whenever the intake of radioactive material by any individual exceeds this forty hour control measure, the licensee shall make such evaluations and take such actions as are necessary to assure against reoccurrence. 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.

g. When respiratory protective equipment is used to limit the inhalation of airborne radioactive material pursuant to subdivision f, a licensee may make allowance for such use in estimating exposures of individuals to such materials provided that such equipment is used as stipulated in regulatory guide 8.15, "Acceptable Programs for Respiratory Protection", of the United States nuclear regulatory commission.

h. Notwithstanding the provisions of subdivisions f and g, the department 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 materials.

i. The licensee shall notify, in writing, the department at least thirty days before the date that respiratory

equipment is first used under the provisions of this subsection.

j. A licensee who was authorized to make allowance for use of respiratory protective equipment prior to (the effective date of this section) shall bring the licensee's respiratory protective program into conformance with the requirements of subdivision g within one year of that date, and is exempt from the requirements of subdivision e.

4. Exposure of minors. (For determining the doses specified in this subsection, a dose from x or gamma rays up to ten 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.)

   a. 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 years of age, to receive in any period of one calendar quarter from all sources of radiation in such licensee's or registrant's possession a dose in excess of ten percent of the limits specified in the table in subdivision a of subsection 1.

   b. 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 years of age, to be exposed to airborne radioactive material in an average concentration in excess of the limits specified in Appendix A, Table II, of this chapter. For purposes of this subdivision, concentrations may be averaged over periods not greater than a week.

   c. The provisions of subdivision c of subsection 3 shall apply to exposures subject to subdivision b.

5. Permissible levels of radiation from external sources in unrestricted areas. (It is the intent of this subsection 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 one-half rem in any one year. If in specific instances, it is determined by the department that this intent is not met, the department may, pursuant to section 33-10-01-09, impose such additional requirements on the licensee or registrant as may be necessary to meet the intent.)

   a. Except as authorized by the department pursuant to subdivision b, no licensee or registrant shall possess, use, or transfer sources of radiation in such a manner as

to create in any unrestricted area from such sources of radiation in the licensee's or registrant's possession:

(1) Radiation levels which, if an individual were continuously present in the area, could result in the individual receiving a dose in excess of two millirems in any one hour; or

(2) Radiation levels which, if an individual were continuously present in the area could result in the individuals receiving a dose in excess of one hundred millirems in any seven consecutive days.

b. Any person may apply to the department for proposed limits upon levels of radiation in unrestricted areas in excess of those specified in subdivision a 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 department will approve the proposed limits if the applicant demonstrates to the satisfaction of the department that the proposed limits are not likely to cause any individual to receive a dose to the whole body in any period of one calendar year in excess of one-half rem.

6. Concentration in effluents to unrestricted areas.

a. 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 Appendix A, Table II of this chapter, except as authorized pursuant to subsection 2 of section 33-10-04-04 or subdivision b of this subsection. For purposes of this subsection concentrations may be averaged over a period not greater than one year.

b. An application for a license or amendment may include proposed limits higher than those specified in subdivision a. The department will approve the proposed limits if the applicant demonstrates all of the following:

(1) That the applicant has made a reasonable effort to minimize the radioactivity contained in effluents to unrestricted areas.

(2) 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 Appendix A, Table II of this chapter.

c. An application for higher limits pursuant to subdivision b 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:

(1) 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 year at the point where the effluent leaves a stack, tube, pipe, or similar conduit.

(2) A description of the properties of the effluents, including:

(a) Chemical composition.

(b) Physical characteristics, including suspended solids content in liquid effluents, and nature of gas or aerosol for air effluents.

(c) The hydrogen ion concentrations (ph) of liquid effluents.

(d) The size range of particulates in effluents released into air.

(3) 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.

(4) Information as to the highest concentration of each radionuclide in an unrestricted area, including anticipated concentrations averaged over a period of one year:

(a) In air at any point of human occupancy; or

(b) In water at points of use downstream from the point of release of the effluent.

(5) The background concentration of radionuclides in the receiving river or stream prior to the release of liquid effluent.

(6) 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.

(7) A description of the waste treatment facilities and procedures used to reduce the concentration of radionuclides in effluents prior to their release.

d. For the purposes of this subsection, the concentration limits in Appendix A, Table II, of this chapter shall apply at the boundary of the restricted area. The concentration of radioactive material discharged through a stack, 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.

e. In addition to limiting concentrations in effluent streams, the department 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 year, would otherwise exceed the daily intake resulting from continuous exposure to air or water containing one-third the concentration of radioactive material specified in Appendix A, Table II, of this chapter.

f. The provisions of this subsection do not apply to disposal of radioactive material into sanitary sewerage systems, which is governed by subsection 3 of section 33-10-04-04.

7. 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 department may incorporate license provisions or issue an order requiring a licensee or registrant to make available to the individual appropriate bioassay services and to furnish a copy of the reports of such services to the department.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 23-01-03

33-10-04-03. Precautionary procedures.

1. Surveys. Each licensee or registrant shall make or cause to be made such surveys as may be necessary for the applicant to establish compliance with this chapter.

2. Personnel monitoring. Each licensee or registrant shall supply appropriate personnel monitoring equipment to, and shall require the use of such equipment by:

   a. Each individual who enters a restricted area under such circumstances that the individual receives, or is likely to receive, a dose in any calendar quarter in excess of twenty-five percent of the applicable value specified in subdivision a of subsection 1 of section 33-10-04-02.

   b. Each individual under eighteen years of age who enters a restricted area under such circumstances that the individual receives, or is likely to receive, a dose in any calendar quarter in excess of five percent of the applicable value specified in subdivision a of subsection 1 of section 33-10-04-02.

   c. Each individual who enters a high radiation area.

3. Caution signs, labels, and signals.

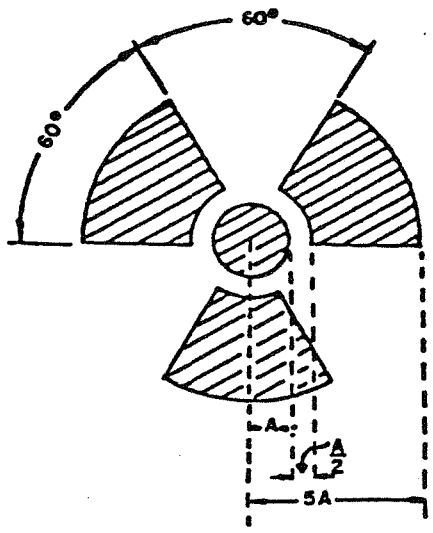
   a. General.

      (1) Except as otherwise authorized by the department, symbols prescribed by this subsection shall use the conventional radiation caution colors (magenta or purple on yellow background). The symbol prescribed by this subsection is the conventional three blade design:

RADIATION SYMBOL

(a) Crosshatch area is to be magenta or purple.

(b) Background is to be yellow.



(2) In addition to the contents of signs and labels prescribed in this subsection, 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.

b. Radiation areas. Each radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words:

CAUTION*

RADIATION AREA

*or "DANGER"

c. High radiation areas.

(1) Each high radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words:

CAUTION*

HIGH RADIATION AREA

*or "DANGER"

(2) Each entrance or access point to a high radiation area shall be:

(a) 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 one hundred millirems in one hour upon entry into the area;

(b) Equipped with a control device which shall energize a conspicuous visible or audible alarm signal in such a manner that the individual entering the high radiation area and the licensee or a supervisor of the activity are made aware of the entry; or

(c) Maintained locked except during periods when access to the area is required, with positive control over each individual entry.

(3) The controls required by paragraph 2 shall be established in such a way that no individual will be prevented from leaving a high radiation area.

(4) In the case of a high radiation area established for a period of thirty days or less, direct surveillance to prevent unauthorized entry may be substituted for the controls required by paragraph 2.

(5) Any licensee or registrant may apply to the department for approval of methods not included in paragraphs 2 and 4 for controlling access to high radiation areas. The department will approve the proposed alternatives if the licensee or registrant demonstrates that the alternative methods of control will prevent unauthorized entry into a high radiation area, and that the requirement of paragraph 3 is met.

d. 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*

AIRBORNE RADIOACTIVITY AREA

*or "DANGER"

e. Additional requirements.

(1) Each area or room in which any radioactive material, other than natural uranium or thorium, is used or stored in an amount exceeding ten times the quantity of radioactive material specified in Appendix B of this chapter shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words:

CAUTION*

~~AIRBORNE RADIOACTIVITY AREA~~
RADIOACTIVE MATERIAL

*or "DANGER"

(2) Each area or room in which natural uranium or thorium is used or stored in an amount exceeding one hundred times the quantity specified in Appendix B of this chapter shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words:

CAUTION*

RADIOACTIVE MATERIAL

*or "DANGER"

f. Containers.

(1) Except as provided in paragraph 3, each container of radioactive material shall bear a durable, clearly visible label identifying the radioactive contents.

(2) A label required pursuant to paragraph 1 shall bear the radiation caution symbol and the words:

CAUTION*

RADIOACTIVE MATERIAL

*or "DANGER"

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 will include radiation levels, kinds of material, estimate of activity, date for which activity is estimated, etc.)

(3) Notwithstanding the provisions of paragraph 1, labeling is not required:

(a) For containers that do not contain radioactive material in quantities greater than the applicable quantities listed in Appendix B of this chapter.

(b) For containers containing only natural uranium or thorium in quantities no greater than ten times the applicable quantities listed in Appendix B of this chapter.

(c) For containers that do not contain radioactive material in concentrations greater than the applicable concentrations listed in Column 2, Table I, Appendix A of this chapter.

(d) 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 established by this chapter.

(e) For containers when they are in transport and packaged and labeled in accordance with regulations published by the department of transportation.

(f) For containers which are accessible 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. (For example, containers in locations such as water-filled canals, storage vaults, or hot cells.)

(g) For manufacturing and process equipment such as piping and tanks.

(4) Each license 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 materials.

g. All radiation machines shall be labeled in a manner which cautions individuals that radiation is produced when the machine is being operated.

4. Exceptions from posting and labeling requirements. Notwithstanding the provisions of subdivision c of subsection 3:

a. 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 inches [30.5 centimeters], from the surface of the source container or housing does not exceed five millirem per hour.

b. Rooms or other areas in hospitals are not required to be posted with caution signs, and control of entrance or access thereto pursuant to subdivision c of subsection 3 is not required, because of the presence of patients containing radioactive material provided that there are personnel in attendance who will take the precautions necessary to prevent the exposure of any individual to radiation or radioactive material in excess of the limits established in the regulations in this chapter.

c. Caution signs are not required to be posted in areas or rooms containing radioactive material for periods of less than eight hours provided that (1) the material is 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 part,

and (2) such area or room is subject to the licensee's or registrant's control.

d. 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 department of transportation.

5. Instruction of personnel. Instructions required for individuals working in or frequenting any portion of a restricted area are specified in subsection 2 of section 33-10-10-01.

6. Storage and control of sources of radiation.

   a. Sources of radiation shall be secured from unauthorized removal from the place of storage.

   b. Sources of radiation in an unrestricted area and not in storage shall be tended under the constant surveillance and immediate control of the licensee.

7. Procedures for picking up, receiving, and opening packages.

   a. (1) Each licensee who expects to receive a package containing quantities of radioactive material in excess of the Type A quantities specified in subdivision b shall:

      (a) If the package is to be delivered to the licensee'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 at the carrier's terminal, make arrangements to receive notification from the carrier of the arrival of the package, at the time of arrival.

   (2) Each licensee 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.

   b. (1) Each licensee, 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, except:

(a) Packages containing no more than the exempt quantity specified in the table in this subdivision.

(b) Packages containing no more than ten millicuries of radioactive material consisting solely of tritium, carbon-14, sulfur-35, or iodine-125.

(c) Packages containing only radioactive material as gases or in special form.

(d) Packages containing only radioactive material in other than liquid form (including Mo-99/Tc-99m generators) and not exceeding the Type A quantity limit specified in the table in this subdivision.

(e) Packages containing only radionuclides with half-lives of less than thirty days and a total quantity of no more than one hundred millicuries.

The monitoring shall be performed as soon as practicable after receipt, but no later than three hours after the package is received at the licensee's facility if received during the licensee's normal working hours, or eighteen hours if received after normal working hours.

~~(2) If removable radioactive contamination in excess of 0.01 microcurie (22,200 disintegrations per minute) per 100 square centimeters of package surface is found on the external surfaces of the package, the licensee shall immediately notify the final delivering carrier and, by telephone and telegraph, the Department.~~

(2) If removable radioactive contamination in excess of one-hundredth microcurie (twenty-two thousand two hundred disintegrations per minute) per one hundred 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 the department.

Table of Exempt and Type A Quantities

Transport group *	Exempt Quantity Limit (in millicuries)	Type A Quantity Limit (in curies)
I	0.01	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

* The definitions of "transport group" and "special form" are specified in section 33-10-01-04.

c. (1) Each licensee, upon receipt of a package containing quantities of radioactive material in excess of the Type A quantities specified in subdivision b, 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 hours after the package is received at the licensee's facility if received during the licensee's normal working hours, or eighteen hours if received after normal working hours.

(2) If radiation levels are found on the external surface of the package in excess of two hundred millirem per hour, or at three feet [91.44 centimeters], from the external surface of the package in excess of ten millirem per hours, the licensee shall immediately notify, by telephone and telegraph, the final delivering carrier and the department.

d. Each licensee 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.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 23-01-03

33-10-04-04. Waste disposal.

1. General requirement. No licensee shall dispose of any radioactive material except:

   a. By transfer to an authorized recipient as provided in chapter 33-10-03; or

   b. As authorized pursuant to subsection 6 of section 33-10-04-02 or subsections 2, 3, or 4 of this section.

2. Method of obtaining approval of proposed disposal procedures. Any person may apply to the department for approval of proposed procedures to dispose of radioactive material in a manner not otherwise authorized in this chapter. 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 water 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 department will not approve any application for a license to receive radioactive material from other persons for disposal on land not owned by a state or the federal government.

3. Disposal by release into sanitary sewerage systems. No licensee shall discharge radioactive material into a sanitary sewerage system unless all of the following are met:

   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 day does not exceed the larger of paragraph 1 or 2:

      (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 not greater than the limits specified in Appendix A, Table I, Column 2, of this chapter.

      (2) Ten times the quantity of such material specified in Appendix B of this chapter.

   c. The quantity of any radioactive material released in any one 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 Appendix A, Table I, Column 2, of this chapter.

~~d. The gross quantity of radioactive material released into the sewerage system by the licensee does not exceed one curie per year.~~

~~Excreta from individuals undergoing medical diagnosis or therapy with radioactive material shall be exempt from any limitations contained in this subsection.~~

d. The gross quantity of licensed and other radioactive material excluding hydrogen-3 and carbon-14, released into the sanitary sewerage system by the licensee does not exceed one curie per year. The quantities of hydrogen-3 and carbon-14 released into the sanitary sewerage system may not exceed five curies per year of hydrogen-3 and one curie per year for carbon-14. Excreta from individuals undergoing medical diagnosis or therapy with radioactive material shall be exempt from any limitations contained in this subsection.

~~4. Disposal by burial in soil. No licensee shall dispose of radioactive material by burial in soil unless all of the following are met.~~

~~a. The total quantity of radioactive material buried at any one location and time does not exceed at the time of burial one thousand times the amount specified in Appendix B of this chapter.~~

~~b. Burial is at a minimum of four feet [1.22 meters].~~

~~c. Successive burials are separated by distances of at least six feet [1.83 meters] and not more than twelve burials are made in any year.~~

4. Disposal by incineration. No licensee shall incinerate radioactive material for the purpose of disposal or preparation for disposal except as specifically approved by the department pursuant to subsection 6 of section 33-10-04-02 and subsection 2 of this 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 department pursuant to subsection 6 of section 33-10-04-02 and subsection 2 of this section.~~

5. Disposal of specific wastes. Any licensee may dispose of the following licensed material without regard to its radioactivity:

   a. Five-hundredths microcuries or less of hydrogen-3 or carbon-14, per gram of medium, used for liquid scintillation accounting.

   b. Five-hundredths microcurie or less of hydrogen-3 or carbon-14, per gram of animal tissue averaged over the weight of the entire animal; provided, however, tissue may not be disposed of under this section in a manner that would permit its use either as food for humans or as animal feed.

   c. Nothing in this section, however, relieves the licensee of maintaining records showing the receipt, transfer, and disposal of such radioactive material.

   d. 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.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 23-01-03

33-10-04-05. Records, reports, and notification.

1. Records of surveys, radiation monitoring, and disposal.

   a. Each licensee or registrant shall maintain records showing the radiation exposures of all individuals for whom personnel monitoring is required under subsection 2 of section 33-10-04-03. Such records shall be kept on Department Form RAD 683, in accordance with the instructions contained in that form, or on clear and legible records containing all the information required by Department Form RAD 683. The doses entered on the forms or records shall be for periods of time not exceeding one calendar quarter.

   b. Each licensee or registrant shall maintain records in the same units used in this chapter, showing the results of surveys required by subsection 1 of section 33-10-04-03, monitoring required by subdivisions b and c of subsection 7 of section 33-10-04-03, and disposals made under subsections 2, 3, and 4 of section 33-10-04-04.

   c. Records of individual exposure to radiation and to radioactive material which must be maintained pursuant to

the provisions of subdivision a and records of bioassays, including results of whole body counting examinations, made pursuant to subsection 7 of section 33-10-04-02 shall be preserved until the department authorizes disposition.

d. Records of the results of surveys and monitoring which must be maintained pursuant to subdivision b shall be preserved for two years after completion of the survey except that the following records shall be maintained until the department authorizes their disposition:

(1) Records of the results of surveys to determine compliance with subdivision a of subsection 3 of section 33-10-04-02.

(2) In the absence of personnel monitoring data, records of the results of surveys to determine external radiation dose.

(3) Records of the results of surveys used to evaluate the release of radioactive effluents to the environment.

e. Records of disposal of licensed radioactive material made pursuant to subsections 2, 3, or 4 of section 33-10-04-04 shall be maintained until the department authorizes their disposition.

f. Records which must be maintained pursuant to this chapter may be the original or a reproduced copy or microfilm if such reproduced copy or microfilm is duly authenticated by authorized personnel and the microfilm is capable of producing a clear and legible copy after storage for the period specified by department regulations.

g. If there is a conflict between this chapter, license condition, or other written department approval or authorization pertaining to the retention period for the same type of record, the retention period specified in this chapter for such records shall apply unless the department, pursuant to subsection 1 of section 33-10-01-05, has granted a specific exemption from the record retention requirements specified in this chapter.

h. The discontinuance of or curtailment of activities, does not relieve the licensee or registrant of responsibility for retaining all records required by this subsection. A licensee or registrant may, however, request the department to accept such records. The acceptance of the records by the department relieves the licensee or registrant of subsequent responsibility only in respect to their preservation as required by this subsection.

2. Reports of theft or loss of sources of radiation. Each licensee or registrant shall report by telephone and telegraph to the department the theft or loss of any source of radiation immediately after such occurrence becomes known.

3. Notification of incidents.

   a. Immediate notification. Each licensee or registrant shall immediately notify the department by telephone and telegraph of any incident involving any source of radiation possessed by the licensee or registrant and which may have caused or threatens to cause any of the following:

      (1) A dose to the whole body of any individual of twenty-five rems or more of radiation; a dose to the skin of the whole body of any individual of one hundred fifty rems or more of radiation; or a dose to the feet, ankles, hands, or forearms of any individual of three hundred seventy-five rems or more of radiation.

      (2) The release of radioactive material in concentrations which, if averaged over a period of twenty-four hours, would exceed five thousand times the limits specified for such materials in Appendix A, Table II.

      (3) A loss of one working week or more of the operation of any facilities affected.

      (4) Damage to property in excess of ~~one~~ two hundred thousand dollars.

   b. Twenty-four-hour notification. Each licensee or registrant shall within twenty-four hours notify the department by telephone and telegraph of any incident involving any source of radiation possessed by the licensee or registrant and which may have caused or threatens to cause any of the following:

      (1) A dose to the whole body of any individual of five rems or more of radiation; a dose to the skin of the whole body of any individual of thirty rems or more of radiation; or a dose to the feet, ankles, hands, or forearms of seventy-five rems or more of radiation.

      (2) The release of radioactive material in concentrations which, if averaged over a period of twenty-four hours, would exceed five hundred times the limits specified for such materials in Appendix A, Table II.

      (3) A loss of one day or more of the operation of any facilities affected.

(4) Damage to property in excess of ~~one~~ two thousand dollars.

c. Any report filed with the department pursuant to this subsection shall be prepared in such a manner that names of individuals who have received excessive doses will be stated in a separate part of the report.

4. Reports of overexposures and excessive levels and concentrations.

a. In addition to any notification required by subsection 3, each licensee or registrant shall make a report, in writing, within thirty days to the department of (1) 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 department; (2) any incident for which notification is required by subsection 3; and (3) levels of radiation or concentrations of radioactive material (not involving excessive exposure of any individual) in an unrestricted area in excess of ten times any applicable limit as set forth in this chapter or as otherwise approved by the department. Each report required under this subdivision shall describe the extent of exposure of individuals to radiation or to radioactive material, including estimates of each individual's dose as required by levels of radiation and concentrations of radioactive material of this subsection involved; the cause of exposure, levels or concentrations; and corrective steps taken or planned to assure against a recurrence.

b. Any report filed with the department pursuant to this subsection shall include for each individual exposed the name, social security number, and date of birth, and an estimate of the individual's dose. The report shall be prepared so that this information is stated in a separate part of the report.

5. Vacating premises. Each specific licensee shall, no less than thirty days before vacating or relinquishing possession or control of premises which may have been contaminated with radioactive material as a result of the licensee's activities, notify the department, in writing, of intent to vacate. When deemed necessary by the department, the licensee shall decontaminate the premises in such a manner as the department may specify.

6. Notifications and reports to individuals.

a. Requirements for notification and reports to individuals of exposure to radiation or radioactive material are specified in subsection 3 of section 33-10-10-01.

b. When a licensee or registrant is required pursuant to subsection 4 to report to the department 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 department, and shall comply with the provisions of subsection 3 of section 33-10-10-01.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

are not identified by overstrike and underscore.

APPENDIX A
CONCENTRATIONS IN AIR AND WATER ABOVE NATURAL BACKGROUND

Element (atomic number)	Isotope[1]		Table I Column 1 Air (μCi/ml)	Table I Column 2 Water (μCi/ml)	Table II Column 1 Air (μCi/ml)	Table II Column 2 Water (μCi/ml)
Actinium (89)	Ac-227	S	2×10^{-12}	6×10^{-5}	8×10^{-14}	2×10^{-6}
		I	3×10^{-11}	9×10^{-3}	9×10^{-13}	3×10^{-4}
	Ac-228	S	8×10^{-8}	3×10^{-3}	3×10^{-9}	9×10^{-5}
		I	2×10^{-8}	3×10^{-3}	6×10^{-10}	9×10^{-5}
Americium (95)	Am-241	S	6×10^{-12}	1×10^{-4}	2×10^{-13}	4×10^{-6}
		I	1×10^{-10}	8×10^{-4}	4×10^{-12}	3×10^{-5}
	Am-242m	S	6×10^{-12}	1×10^{-4}	2×10^{-13}	4×10^{-6}
		I	3×10^{-10}	3×10^{-3}	9×10^{-12}	9×10^{-5}
	Am-242	S	4×10^{-8}	4×10^{-3}	1×10^{-9}	1×10^{-4}
		I	5×10^{-8}	4×10^{-3}	2×10^{-9}	1×10^{-4}
	Am-243	S	6×10^{-12}	1×10^{-4}	2×10^{-13}	4×10^{-6}
		I	1×10^{-10}	8×10^{-4}	4×10^{-12}	3×10^{-5}
	Am-244	S	4×10^{-6}	1×10^{-1}	1×10^{-7}	5×10^{-3}
		I	2×10^{-5}	1×10^{-1}	8×10^{-7}	5×10^{-3}
Antimony (51)	Sb-122	S	2×10^{-7}	8×10^{-4}	6×10^{-9}	3×10^{-5}
		I	1×10^{-7}	8×10^{-4}	5×10^{-9}	3×10^{-5}
	Sb-124	S	2×10^{-7}	7×10^{-4}	5×10^{-9}	2×10^{-5}
		I	2×10^{-8}	7×10^{-4}	7×10^{-10}	2×10^{-5}
	Sb-125	S	5×10^{-8}	3×10^{-3}	2×10^{-8}	1×10^{-4}
		I	3×10^{-8}	3×10^{-3}	9×10^{-10}	1×10^{-4}
Argon (18)	Ar-37	Sub[2]	6×10^{-3}	------	1×10^{-4}	------
	Ar-41	Sub	2×10^{-6}	------	4×10^{-8}	------
Arsenic (33)	As-73	S	2×10^{-6}	1×10^{-2}	7×10^{-8}	5×10^{-4}
		I	4×10^{-7}	1×10^{-2}	1×10^{-8}	5×10^{-4}
	As-74	S	3×10^{-7}	2×10^{-3}	1×10^{-8}	5×10^{-5}
		I	1×10^{-7}	2×10^{-3}	4×10^{-9}	5×10^{-5}
	As-76	S	1×10^{-7}	6×10^{-4}	4×10^{-9}	2×10^{-5}
		I	1×10^{-7}	6×10^{-4}	3×10^{-9}	2×10^{-5}
	As-77	S	5×10^{-7}	2×10^{-3}	2×10^{-8}	8×10^{-5}
		I	4×10^{-7}	2×10^{-3}	1×10^{-8}	8×10^{-5}
Astatine (85)	At-211	S	7×10^{-9}	5×10^{-5}	2×10^{-10}	2×10^{-6}
		I	3×10^{-8}	2×10^{-3}	1×10^{-9}	7×10^{-5}
Barium (56)	Ba-131	S	1×10^{-6}	5×10^{-3}	4×10^{-8}	2×10^{-4}
		I	4×10^{-7}	5×10^{-3}	1×10^{-8}	2×10^{-4}
	Ba-140	S	1×10^{-7}	8×10^{-4}	4×10^{-9}	3×10^{-5}
		I	4×10^{-8}	7×10^{-4}	1×10^{-9}	2×10^{-5}
Berkelium (97)	Bk-249	S	9×10^{-10}	2×10^{-2}	3×10^{-11}	6×10^{-4}
		I	1×10^{-7}	2×10^{-2}	4×10^{-9}	6×10^{-4}
	Bk-250	S	1×10^{-7}	6×10^{-3}	5×10^{-9}	2×10^{-4}
		I	1×10^{-6}	6×10^{-3}	4×10^{-8}	2×10^{-4}
Beryllium (4)	Be-7	S	6×10^{-6}	5×10^{-2}	2×10^{-7}	2×10^{-3}
		I	1×10^{-6}	5×10^{-2}	4×10^{-8}	2×10^{-3}
Bismuth (83)	Bi-206	S	2×10^{-7}	1×10^{-3}	6×10^{-9}	4×10^{-5}
		I	1×10^{-7}	1×10^{-3}	5×10^{-9}	4×10^{-5}
	Bi-207	S	2×10^{-7}	2×10^{-3}	6×10^{-9}	6×10^{-5}
		I	1×10^{-8}	2×10^{-3}	5×10^{-10}	6×10^{-5}
	Bi-210	S	6×10^{-9}	1×10^{-3}	2×10^{-10}	4×10^{-5}

(See notes at end of appendix)

Element (atomic number)	Isotope[1]		Table I Column 1 Air (μCi/ml)	Table I Column 2 Water (μCi/ml)	Table II Column 1 Air (μCi/ml)	Table II Column 2 Water (μCi/ml)
		I	6×10^{-9}	1×10^{-3}	2×10^{-10}	4×10^{-5}
	Bi-212	S	1×10^{-7}	1×10^{-2}	3×10^{-9}	4×10^{-4}
		I	2×10^{-7}	1×10^{-2}	7×10^{-9}	4×10^{-4}
Bromine (35)	Br-82	S	1×10^{-6}	8×10^{-3}	4×10^{-8}	3×10^{-4}
		I	2×10^{-7}	1×10^{-3}	6×10^{-9}	4×10^{-5}
Cadmium (48)	Cd-109	S	5×10^{-8}	5×10^{-3}	2×10^{-9}	2×10^{-4}
		I	7×10^{-8}	5×10^{-3}	3×10^{-9}	2×10^{-4}
	Cd-115m	S	4×10^{-8}	7×10^{-4}	1×10^{-9}	3×10^{-5}
		I	4×10^{-8}	7×10^{-4}	1×10^{-9}	3×10^{-5}
	Cd-115	S	2×10^{-7}	1×10^{-3}	8×10^{-9}	3×10^{-5}
		I	2×10^{-7}	1×10^{-3}	6×10^{-9}	4×10^{-5}
Calcium (20)	Ca-45	S	3×10^{-8}	3×10^{-4}	1×10^{-9}	9×10^{-6}
		I	1×10^{-7}	5×10^{-3}	4×10^{-9}	2×10^{-4}
	Ca-47	S	2×10^{-7}	1×10^{-3}	6×10^{-9}	5×10^{-5}
		I	2×10^{-7}	1×10^{-3}	6×10^{-9}	3×10^{-5}
Californium (98)	Cf-49	S	2×10^{-12}	1×10^{-4}	5×10^{-14}	4×10^{-6}
		I	1×10^{-10}	7×10^{-4}	3×10^{-12}	2×10^{-5}
	Cf-250	S	5×10^{-12}	4×10^{-4}	2×10^{-13}	1×10^{-5}
		I	1×10^{-10}	7×10^{-4}	3×10^{-12}	3×10^{-5}
	Cf-251	S	2×10^{-12}	1×10^{-4}	6×10^{-14}	4×10^{-6}
		I	1×10^{-10}	8×10^{-4}	3×10^{-12}	3×10^{-5}
	Cf-252	S	6×10^{-12}	2×10^{-4}	2×10^{-13}	7×10^{-6}
		I	3×10^{-11}	2×10^{-4}	1×10^{-12}	7×10^{-6}
	Cf-253	S	8×10^{-10}	4×10^{-3}	3×10^{-11}	1×10^{-4}
		I	8×10^{-10}	4×10^{-3}	3×10^{-11}	1×10^{-4}
	Cf-254	S	5×10^{-12}	4×10^{-6}	2×10^{-13}	1×10^{-7}
		I	5×10^{-12}	4×10^{-6}	2×10^{-13}	1×10^{-7}
Carbon (6)	C-14	S	4×10^{-6}	2×10^{-2}	1×10^{-7}	8×10^{-4}
	(CO_2)	Sub[2]	5×10^{-5}	------	1×10^{-6}	------
Cerium (58)	Ce-141	S	4×10^{-7}	3×10^{-3}	2×10^{-8}	9×10^{-5}
		I	2×10^{-7}	3×10^{-3}	5×10^{-9}	9×10^{-5}
	Ce-143	S	3×10^{-7}	1×10^{-3}	9×10^{-9}	4×10^{-5}
		I	2×10^{-7}	1×10^{-3}	7×10^{-9}	4×10^{-5}
	Ce-144	S	1×10^{-8}	3×10^{-4}	3×10^{-10}	1×10^{-5}
		I	6×10^{-9}	3×10^{-4}	2×10^{-10}	1×10^{-5}
Cesium (55)	Cs-131	S	1×10^{-5}	7×10^{-2}	4×10^{-7}	2×10^{-3}
		I	3×10^{-6}	3×10^{-2}	1×10^{-7}	9×10^{-4}
	Cs-134m	S	4×10^{-5}	2×10^{-1}	1×10^{-6}	6×10^{-3}
		I	6×10^{-6}	3×10^{-2}	2×10^{-7}	1×10^{-3}
	Cs-134	S	4×10^{-8}	3×10^{-4}	1×10^{-9}	9×10^{-6}
		I	1×10^{-8}	3×10^{-3}	4×10^{-10}	4×10^{-5}
	Cs-135	S	5×10^{-7}	1×10^{-3}	2×10^{-8}	4×10^{-4}
		I	9×10^{-8}	3×10^{-3}	3×10^{-9}	1×10^{-4}
	Cs-136	S	4×10^{-7}	7×10^{-3}	1×10^{-8}	2×10^{-5}
		I	2×10^{-7}	2×10^{-3}	6×10^{-9}	9×10^{-5}
	Cs-137	S	6×10^{-8}	4×10^{-4}	2×10^{-9}	6×10^{-5}
		I	1×10^{-8}	1×10^{-3}	5×10^{-10}	2×10^{-5}
Chlorine (17)	Cl-36	S	4×10^{-7}	2×10^{-3}	1×10^{-8}	8×10^{-5}
		I	2×10^{-8}	2×10^{-3}	8×10^{-10}	6×10^{-5}
	Cl-38	S	3×10^{-6}	1×10^{-2}	9×10^{-8}	4×10^{-4}
		I	2×10^{-6}	1×10^{-2}	7×10^{-8}	4×10^{-4}
Chromium (24)	Cr-51	S	1×10^{-5}	5×10^{-2}	4×10^{-7}	2×10^{-3}
		I	2×10^{-6}	5×10^{-2}	8×10^{-8}	2×10^{-3}

(See notes at end of appendix)

Element (atomic number)	Isotope[1/]		Table I Column 1 Air (μCi/ml)	Table I Column 2 Water (μCi/ml)	Table II Column 1 Air (μCi/ml)	Table II Column 2 Water (μCi/ml)
Cobalt (27)	Co-57	S	3×10^{-6}	2×10^{-2}	1×10^{-7}	5×10^{-4}
		I	2×10^{-7}	1×10^{-2}	6×10^{-9}	4×10^{-4}
	Co-58m	S	2×10^{-5}	8×10^{-2}	6×10^{-7}	3×10^{-3}
		I	9×10^{-6}	6×10^{-2}	3×10^{-7}	2×10^{-3}
	Co-58	S	8×10^{-7}	4×10^{-3}	3×10^{-8}	1×10^{-4}
		I	5×10^{-8}	3×10^{-3}	2×10^{-9}	9×10^{-5}
	Co-60	S	3×10^{-7}	1×10^{-3}	1×10^{-8}	5×10^{-5}
		I	9×10^{-9}	1×10^{-3}	3×10^{-10}	3×10^{-5}
Copper (29)	Cu-64	S	2×10^{-6}	1×10^{-2}	7×10^{-8}	3×10^{-4}
		I	1×10^{-6}	6×10^{-3}	4×10^{-8}	2×10^{-4}
Curium (96)	Cm-242	S	1×10^{-10}	7×10^{-4}	4×10^{-12}	2×10^{-5}
		I	2×10^{-10}	7×10^{-4}	6×10^{-12}	2×10^{-5}
	Cm-243	S	6×10^{-12}	1×10^{-4}	2×10^{-13}	5×10^{-6}
		I	1×10^{-10}	7×10^{-4}	3×10^{-12}	2×10^{-5}
	Cm-244	S	9×10^{-12}	2×10^{-4}	3×10^{-13}	7×10^{-6}
		I	1×10^{-10}	8×10^{-4}	3×10^{-12}	3×10^{-5}
	Cm-245	S	5×10^{-12}	1×10^{-4}	2×10^{-13}	4×10^{-6}
		I	1×10^{-10}	8×10^{-4}	4×10^{-12}	3×10^{-5}
	Cm-246	S	5×10^{-12}	1×10^{-4}	2×10^{-13}	4×10^{-6}
		I	1×10^{-10}	8×10^{-4}	4×10^{-12}	3×10^{-5}
	Cm-247	S	5×10^{-12}	1×10^{-4}	2×10^{-13}	4×10^{-6}
		I	1×10^{-10}	6×10^{-4}	4×10^{-12}	2×10^{-5}
	Cm-248	S	6×10^{-13}	1×10^{-5}	2×10^{-14}	4×10^{-7}
		I	1×10^{-11}	4×10^{-5}	4×10^{-13}	1×10^{-6}
	Cm-249	S	1×10^{-5}	6×10^{-2}	4×10^{-7}	2×10^{-3}
		I	1×10^{-5}	6×10^{-2}	4×10^{-7}	2×10^{-3}
Dysprosium (66)	Dy-165	S	3×10^{-6}	1×10^{-2}	9×10^{-8}	4×10^{-4}
		I	2×10^{-6}	1×10^{-2}	7×10^{-8}	4×10^{-4}
	Dy-166	S	2×10^{-7}	1×10^{-3}	8×10^{-9}	4×10^{-5}
		I	2×10^{-7}	1×10^{-3}	7×10^{-9}	4×10^{-5}
Einsteinium (99)	Es-253	S	8×10^{-10}	7×10^{-4}	3×10^{-11}	2×10^{-5}
		I	6×10^{-10}	7×10^{-4}	2×10^{-11}	2×10^{-5}
	Es-254m	S	5×10^{-9}	5×10^{-4}	2×10^{-10}	2×10^{-5}
		I	6×10^{-9}	5×10^{-4}	2×10^{-10}	2×10^{-5}
	Es-254	S	2×10^{-11}	4×10^{-4}	6×10^{-13}	1×10^{-5}
		I	1×10^{-10}	4×10^{-4}	4×10^{-12}	1×10^{-5}
	Es-255	S	5×10^{-10}	8×10^{-4}	2×10^{-11}	3×10^{-5}
		I	4×10^{-10}	8×10^{-4}	1×10^{-11}	3×10^{-5}
Erbium (68)	Er-169	S	6×10^{-7}	3×10^{-3}	2×10^{-8}	9×10^{-5}
		I	4×10^{-7}	3×10^{-3}	1×10^{-8}	9×10^{-5}
	Er-171	S	7×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
		I	6×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
Europium (63)	Eu-152 (Tr=9.2 hrs)	S	4×10^{-7}	2×10^{-3}	1×10^{-8}	6×10^{-5}
		I	3×10^{-8}	2×10^{-3}	1×10^{-8}	6×10^{-5}
	Eu-152 (Tr=13 yrs)	S	1×10^{-8}	2×10^{-3}	4×10^{-10}	8×10^{-5}
		I	2×10^{-8}	2×10^{-3}	6×10^{-10}	8×10^{-5}
	Eu-154	S	4×10^{-9}	6×10^{-4}	1×10^{-10}	2×10^{-5}
		I	7×10^{-9}	6×10^{-4}	2×10^{-10}	2×10^{-5}
	Eu-155	S	9×10^{-8}	6×10^{-3}	3×10^{-9}	2×10^{-4}
		I	7×10^{-8}	6×10^{-3}	3×10^{-9}	2×10^{-4}
Fermium (100)	Fm-254	S	6×10^{-8}	4×10^{-3}	2×10^{-9}	1×10^{-4}
		I	7×10^{-8}	4×10^{-3}	2×10^{-9}	1×10^{-4}
	Fm-255	S	2×10^{-8}	1×10^{-3}	6×10^{-10}	3×10^{-5}
		I	1×10^{-8}	1×10^{-3}	4×10^{-10}	3×10^{-5}

(See notes at end of appendix)

Element (atomic number)	Isotope[1]		Table I Column 1 Air (μCi/ml)	Table I Column 2 Water (μCi/ml)	Table II Column 1 Air (μCi/ml)	Table II Column 2 Water (μCi/ml)
	Fm-256	S	3×10^{-9}	3×10^{-5}	1×10^{-10}	9×10^{-7}
		I	2×10^{-9}	3×10^{-5}	6×10^{-11}	9×10^{-7}
Fluorine (9)	F-18	S	5×10^{-6}	2×10^{-2}	2×10^{-7}	8×10^{-4}
		I	3×10^{-6}	1×10^{-2}	9×10^{-8}	5×10^{-4}
Gadolinium (64)	Gd-153	S	2×10^{-7}	6×10^{-3}	8×10^{-9}	2×10^{-4}
		I	9×10^{-8}	6×10^{-3}	3×10^{-9}	2×10^{-4}
	Gd-159	S	5×10^{-7}	2×10^{-3}	2×10^{-8}	8×10^{-5}
		I	4×10^{-7}	2×10^{-3}	1×10^{-8}	8×10^{-5}
Gallium (31)	Ga-72	S	2×10^{-7}	1×10^{-3}	8×10^{-9}	4×10^{-5}
		I	2×10^{-7}	1×10^{-3}	6×10^{-9}	4×10^{-5}
Germanium (32)	Ge-71	S	1×10^{-5}	5×10^{-2}	4×10^{-7}	2×10^{-3}
		I	6×10^{-6}	5×10^{-2}	2×10^{-7}	2×10^{-3}
Gold (79)	Au-196	S	1×10^{-6}	5×10^{-3}	4×10^{-8}	2×10^{-4}
		I	6×10^{-7}	4×10^{-3}	2×10^{-8}	1×10^{-4}
	Au-198	S	3×10^{-7}	2×10^{-3}	1×10^{-8}	5×10^{-5}
		I	2×10^{-7}	1×10^{-3}	8×10^{-9}	5×10^{-5}
	Au-199	S	1×10^{-6}	5×10^{-3}	4×10^{-8}	2×10^{-4}
		I	8×10^{-7}	4×10^{-3}	3×10^{-8}	2×10^{-4}
Hafnium (72)	Hf-181	S	4×10^{-8}	2×10^{-3}	1×10^{-9}	7×10^{-5}
		I	7×10^{-8}	2×10^{-3}	3×10^{-9}	7×10^{-5}
Holmium (67)	Ho-166	S	2×10^{-7}	9×10^{-4}	7×10^{-9}	3×10^{-5}
		I	2×10^{-7}	9×10^{-4}	6×10^{-9}	3×10^{-5}
Hydrogen (1)	H-3	S	5×10^{-6}	1×10^{-1}	2×10^{-7}	3×10^{-3}
		I	5×10^{-6}	1×10^{-1}	2×10^{-7}	3×10^{-3}
		Sub[2]	2×10^{-3}	------	4×10^{-5}	------
Indium (49)	In-113m	S	8×10^{-6}	4×10^{-2}	3×10^{-7}	1×10^{-3}
		I	7×10^{-7}	4×10^{-2}	2×10^{-7}	1×10^{-3}
	In-114m	S	1×10^{-8}	5×10^{-4}	4×10^{-9}	2×10^{-5}
		I	2×10^{-8}	5×10^{-4}	7×10^{-10}	2×10^{-5}
	In-115m	S	2×10^{-6}	1×10^{-2}	8×10^{-8}	4×10^{-4}
		I	2×10^{-6}	1×10^{-2}	6×10^{-8}	4×10^{-4}
	In-115	S	2×10^{-7}	3×10^{-3}	9×10^{-9}	9×10^{-5}
		I	3×10^{-8}	3×10^{-3}	1×10^{-9}	9×10^{-5}
Iodine (53)	I-125	S	5×10^{-9}	4×10^{-5}	8×10^{-11}	2×10^{-7}
		I	2×10^{-7}	6×10^{-3}	6×10^{-9}	2×10^{-4}
	I-126	S	8×10^{-9}	5×10^{-5}	9×10^{-11}	3×10^{-7}
		I	3×10^{-7}	3×10^{-3}	1×10^{-8}	9×10^{-5}
	I-129	S	2×10^{-9}	1×10^{-5}	2×10^{-11}	6×10^{-8}
		I	7×10^{-8}	6×10^{-3}	2×10^{-9}	2×10^{-4}
	I-131	S	9×10^{-9}	6×10^{-5}	1×10^{-10}	3×10^{-7}
		I	3×10^{-7}	2×10^{-3}	1×10^{-8}	6×10^{-5}
	I-132	S	2×10^{-7}	2×10^{-3}	3×10^{-9}	8×10^{-6}
		I	9×10^{-7}	5×10^{-3}	3×10^{-8}	8×10^{-4}
	I-133	S	3×10^{-8}	2×10^{-4}	4×10^{-10}	2×10^{-6}
		I	2×10^{-7}	2×10^{-3}	4×10^{-9}	1×10^{-5}
	I-134	S	5×10^{-7}	1×10^{-3}	7×10^{-9}	4×10^{-5}
		I	3×10^{-6}	4×10^{-3}	6×10^{-9}	2×10^{-5}
	I-135	S	1×10^{-7}	2×10^{-2}	1×10^{-7}	6×10^{-4}
		I	4×10^{-7}	7×10^{-4}	1×10^{-9}	6×10^{-6}
				2×10^{-3}	1×10^{-8}	4×10^{-5}
Iridium (77)	Ir-190	S	1×10^{-6}	6×10^{-3}	4×10^{-8}	2×10^{-4}
		I	4×10^{-7}	5×10^{-3}	1×10^{-8}	2×10^{-4}

(See notes at end of appendix)

Element (atomic number)	Isotope[1]		Table I Column 1 Air (μCi/ml)	Table I Column 2 Water (μCi/ml)	Table II Column 1 Air (μCi/ml)	Table II Column 2 Water (μCi/ml)
	Ir-192	S	1×10^{-7}	1×10^{-3}	4×10^{-9}	4×10^{-5}
		I	3×10^{-8}	1×10^{-3}	9×10^{-10}	4×10^{-5}
	Ir-194	S	2×10^{-7}	1×10^{-3}	8×10^{-9}	3×10^{-5}
		I	2×10^{-7}	9×10^{-4}	5×10^{-9}	3×10^{-5}
Iron (26)	Fe-55	S	9×10^{-7}	2×10^{-2}	3×10^{-8}	8×10^{-4}
		I	1×10^{-6}	7×10^{-2}	3×10^{-8}	2×10^{-3}
	Fe-59	S	1×10^{-7}	2×10^{-3}	5×10^{-9}	6×10^{-5}
		I	5×10^{-8}	2×10^{-3}	2×10^{-9}	5×10^{-5}
Krypton (36)	Kr-85m	Sub[2]	6×10^{-6}	------	1×10^{-7}	------
	Kr-85	Sub	1×10^{-5}	------	3×10^{-7}	------
	Kr-87	Sub	1×10^{-6}	------	2×10^{-8}	------
	Kr-88	Sub	1×10^{-6}	------	2×10^{-8}	------
Lanthanum (57)	La-140	S	2×10^{-7}	7×10^{-4}	5×10^{-9}	2×10^{-5}
		I	1×10^{-7}	7×10^{-4}	4×10^{-9}	2×10^{-5}
Lead (82)	Pb-204	S	3×10^{-6}	1×10^{-2}	9×10^{-8}	4×10^{-4}
		I	2×10^{-6}	1×10^{-2}	6×10^{-8}	4×10^{-4}
	Pb-210	S	1×10^{-10}	4×10^{-6}	4×10^{-12}	1×10^{-7}
		I	2×10^{-10}	5×10^{-3}	8×10^{-12}	2×10^{-4}
	Pb-212	S	2×10^{-8}	6×10^{-4}	6×10^{-10}	2×10^{-5}
		I	2×10^{-8}	5×10^{-4}	7×10^{-10}	2×10^{-5}
Lutetium (71)	Lu-177	S	6×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
		I	5×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
Manganese (25)	Mn-52	S	2×10^{-7}	1×10^{-3}	7×10^{-9}	3×10^{-5}
		I	1×10^{-7}	9×10^{-4}	5×10^{-9}	3×10^{-5}
	Mn-54	S	4×10^{-7}	4×10^{-3}	1×10^{-8}	1×10^{-4}
		I	4×10^{-8}	3×10^{-3}	1×10^{-9}	1×10^{-4}
	Mn-56	S	8×10^{-7}	4×10^{-3}	3×10^{-8}	1×10^{-4}
		I	5×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
Mercury (80	Hg-197m	S	7×10^{-7}	6×10^{-3}	3×10^{-8}	2×10^{-4}
		I	8×10^{-7}	5×10^{-3}	3×10^{-8}	2×10^{-4}
	Hg-197	S	1×10^{-6}	9×10^{-3}	4×10^{-8}	3×10^{-4}
		I	3×10^{-6}	1×10^{-2}	9×10^{-8}	5×10^{-4}
	Hg-203	S	7×10^{-8}	5×10^{-4}	2×10^{-9}	2×10^{-5}
		I	1×10^{-7}	3×10^{-3}	4×10^{-9}	1×10^{-4}
Molybdenum (42)	Mo-99	S	7×10^{-7}	5×10^{-3}	3×10^{-8}	2×10^{-4}
		I	2×10^{-7}	1×10^{-3}	7×10^{-9}	4×10^{-5}
Neodymium (60)	Nd-144	S	8×10^{-11}	2×10^{-3}	3×10^{-12}	7×10^{-5}
		I	3×10^{-10}	2×10^{-3}	1×10^{-11}	8×10^{-5}
	Nd-147	S	4×10^{-7}	2×10^{-3}	1×10^{-8}	6×10^{-5}
		I	2×10^{-7}	2×10^{-3}	8×10^{-9}	6×10^{-5}
	Nd-149	S	2×10^{-6}	8×10^{-3}	6×10^{-8}	3×10^{-4}
		I	1×10^{-6}	8×10^{-3}	5×10^{-8}	3×10^{-4}
Neptunium (93)	Np-237	S	4×10^{-12}	9×10^{-5}	1×10^{-13}	3×10^{-6}
		I	1×10^{-10}	9×10^{-4}	4×10^{-12}	3×10^{-5}
	Np-239	S	8×10^{-7}	4×10^{-3}	3×10^{-8}	1×10^{-4}
		I	7×10^{-7}	4×10^{-3}	2×10^{-8}	1×10^{-4}
Nickel (28)	Ni-59	S	5×10^{-7}	6×10^{-3}	2×10^{-8}	2×10^{-4}
		I	8×10^{-7}	6×10^{-2}	3×10^{-8}	2×10^{-3}
	Ni-63	S	6×10^{-8}	8×10^{-4}	2×10^{-9}	3×10^{-5}
		I	3×10^{-7}	2×10^{-2}	1×10^{-8}	7×10^{-4}
	Ni-65	S	9×10^{-7}	4×10^{-3}	3×10^{-8}	1×10^{-4}

(See notes at end of appendix)

Element (atomic number)	Isotope[1/]		Table I Column I Air (μCi/ml)	Table I Column 2 Water (μCi/ml)	Table II Column 1 Air (μCi/ml)	Table II Column 2 Water (μCi/ml)
		I	$5x10^{-7}$	$3x10^{-3}$	$2x10^{-8}$	$1x10^{-4}$
Niobium (41)	Nb-93m	S	$1x10^{-7}$	$1x10^{-2}$	$4x10^{-9}$	$4x10^{-4}$
		I	$2x10^{-7}$	$1x10^{-2}$	$5x10^{-9}$	$4x10^{-4}$
	Nb-95	S	$5x10^{-7}$	$3x10^{-3}$	$2x10^{-8}$	$1x10^{-4}$
		I	$1x10^{-7}$	$3x10^{-3}$	$3x10^{-9}$	$1x10^{-4}$
	Nb-97	S	$6x10^{-6}$	$3x10^{-2}$	$2x10^{-7}$	$9x10^{-4}$
		I	$5x10^{-6}$	$3x10^{-2}$	$2x10^{-7}$	$9x10^{-4}$
Osmium (76)	Os-185	S	$5x10^{-7}$	$2x10^{-3}$	$2x10^{-8}$	$7x10^{-5}$
		I	$5x10^{-8}$	$2x10^{-3}$	$2x10^{-9}$	$7x10^{-5}$
	Os-191m	S	$2x10^{-5}$	$7x10^{-2}$	$6x10^{-7}$	$3x10^{-3}$
		I	$9x10^{-6}$	$7x10^{-2}$	$3x10^{-7}$	$2x10^{-3}$
	Os-191	S	$1x10^{-6}$	$5x10^{-3}$	$4x10^{-8}$	$2x10^{-4}$
		I	$4x10^{-7}$	$5x10^{-3}$	$1x10^{-8}$	$2x10^{-4}$
	Os-193	S	$4x10^{-7}$	$2x10^{-3}$	$1x10^{-8}$	$6x10^{-5}$
		I	$3x10^{-7}$	$2x10^{-3}$	$9x10^{-9}$	$5x10^{-5}$
Palladium (46)	Pd-103	S	$1x10^{-6}$	$1x10^{-2}$	$5x10^{-8}$	$3x10^{-4}$
		I	$7x10^{-7}$	$8x10^{-3}$	$3x10^{-8}$	$3x10^{-4}$
	Pd-109	S	$6x10^{-7}$	$3x10^{-3}$	$2x10^{-8}$	$9x10^{-5}$
		I	$4x10^{-7}$	$2x10^{-3}$	$1x10^{-8}$	$7x10^{-5}$
Phosphorus (15)	P-32	S	$7x10^{-8}$	$5x10^{-4}$	$2x10^{-9}$	$2x10^{-5}$
		I	$8x10^{-8}$	$7x10^{-4}$	$3x10^{-9}$	$2x10^{-5}$
Platinum (78)	Pt-191	S	$8x10^{-7}$	$4x10^{-3}$	$3x10^{-8}$	$1x10^{-4}$
		I	$6x10^{-7}$	$3x10^{-3}$	$2x10^{-8}$	$1x10^{-4}$
	Pt-193m	S	$7x10^{-6}$	$3x10^{-2}$	$2x10^{-7}$	$1x10^{-3}$
		I	$5x10^{-6}$	$3x10^{-2}$	$2x10^{-7}$	$1x10^{-3}$
	Pt-193	S	$1x10^{-6}$	$3x10^{-2}$	$4x10^{-8}$	$9x10^{-4}$
		I	$3x10^{-7}$	$5x10^{-2}$	$1x10^{-8}$	$2x10^{-3}$
	Pt-197m	S	$6x10^{-6}$	$3x10^{-2}$	$2x10^{-7}$	$1x10^{-3}$
		I	$5x10^{-6}$	$3x10^{-2}$	$2x10^{-7}$	$9x10^{-4}$
	Pt-197	S	$8x10^{-7}$	$4x10^{-3}$	$3x10^{-8}$	$1x10^{-4}$
		I	$6x10^{-7}$	$3x10^{-3}$	$2x10^{-8}$	$1x10^{-4}$
Plutonium (94)	Pu-238	S	$2x10^{-12}$	$1x10^{-4}$	$7x10^{-14}$	$5x10^{-6}$
		I	$3x10^{-11}$	$8x10^{-4}$	$1x10^{-12}$	$3x10^{-5}$
	Pu-239	S	$2x10^{-12}$	$1x10^{-4}$	$6x10^{-14}$	$5x10^{-6}$
		I	$4x10^{-11}$	$8x10^{-4}$	$1x10^{-12}$	$3x10^{-5}$
	Pu-240	S	$2x10^{-12}$	$1x10^{-4}$	$6x10^{-14}$	$5x10^{-6}$
		I	$4x10^{-11}$	$8x10^{-4}$	$1x10^{-12}$	$3x10^{-5}$
	Pu-241	S	$9x10^{-11}$	$7x10^{-3}$	$3x10^{-12}$	$2x10^{-4}$
		I	$4x10^{-8}$	$4x10^{-2}$	$1x10^{-9}$	$1x10^{-3}$
	Pu-242	S	$2x10^{-12}$	$1x10^{-4}$	$6x10^{-14}$	$5x10^{-6}$
		I	$4x10^{-11}$	$9x10^{-4}$	$1x10^{-12}$	$3x10^{-5}$
	Pu-243	S	$2x10^{-6}$	$1x10^{-2}$	$6x10^{-8}$	$3x10^{-4}$
		I	$2x10^{-2}$	$1x10^{-2}$	$8x10^{-8}$	$3x10^{-4}$
	Pu-244	S	$2x10^{-12}$	$1x10^{-4}$	$6x10^{-14}$	$4x10^{-6}$
		I	$3x10^{-11}$	$3x10^{-4}$	$1x10^{-12}$	$1x10^{-5}$
Polonium (84)	Po-210	S	$5x10^{-10}$	$2x10^{-5}$	$2x10^{-11}$	$7x10^{-7}$
		I	$2x10^{-10}$	$8x10^{-4}$	$7x10^{-12}$	$3x10^{-5}$
Potassium (19)	K-42	S	$2x10^{-6}$	$9x10^{-3}$	$7x10^{-8}$	$3x10^{-4}$
		I	$1x10^{-7}$	$6x10^{-4}$	$4x10^{-9}$	$2x10^{-5}$
Praseodymium (59)	Pr-142	S	$2x10^{-7}$	$9x10^{-4}$	$7x10^{-9}$	$3x10^{-5}$
		I	$2x10^{-7}$	$9x10^{-4}$	$5x10^{-9}$	$3x10^{-5}$
	Pr-143	S	$3x10^{-7}$	$1x10^{-3}$	$1x10^{-8}$	$5x10^{-5}$
		I	$2x10^{-7}$	$1x10^{-3}$	$6x10^{-9}$	$5x10^{-5}$

(See notes at end of appendix)

Element (atomic number)	Isotope[1]		Table I Column 1 Air (μCi/ml)	Table I Column 2 Water (μCi/ml)	Table II Column 1 Air (μCi/ml)	Table II Column 2 Water (μCi/ml)
Promethium (61)	Pm-147	S	6×10^{-8}	6×10^{-3}	2×10^{-9}	2×10^{-4}
		I	1×10^{-7}	6×10^{-3}	3×10^{-9}	2×10^{-4}
	Pm-149	S	3×10^{-7}	1×10^{-3}	1×10^{-8}	4×10^{-5}
		I	2×10^{-7}	1×10^{-3}	8×10^{-9}	4×10^{-5}
Protactinium (91)	Pa-230	S	2×10^{-9}	7×10^{-3}	6×10^{-11}	2×10^{-4}
		I	8×10^{-10}	7×10^{-3}	3×10^{-11}	2×10^{-4}
	Pa-231	S	1×10^{-12}	3×10^{-5}	4×10^{-14}	9×10^{-7}
		I	1×10^{-10}	8×10^{-4}	4×10^{-12}	2×10^{-5}
	Pa-233	S	6×10^{-7}	4×10^{-3}	2×10^{-8}	1×10^{-4}
		I	2×10^{-7}	3×10^{-3}	6×10^{-9}	1×10^{-4}
Radium (88)	Ra-223	S	2×10^{-9}	2×10^{-5}	6×10^{-11}	7×10^{-7}
		I	2×10^{-10}	1×10^{-4}	8×10^{-12}	4×10^{-6}
	Ra-224	S	5×10^{-9}	7×10^{-5}	2×10^{-10}	2×10^{-6}
		I	7×10^{-10}	2×10^{-4}	2×10^{-11}	5×10^{-6}
	Ra-226	S	3×10^{-11}	4×10^{-7}	3×10^{-12}	3×10^{-8}
		I	5×10^{-11}	9×10^{-4}	2×10^{-12}	3×10^{-5}
	Ra-228	S	7×10^{-11}	8×10^{-7}	2×10^{-12}	3×10^{-8}
		I	4×10^{-11}	7×10^{-4}	1×10^{-12}	3×10^{-5}
Radon (86)	Rn-220	S	3×10^{-7}	------	1×10^{-8}	------
		I	------	------	------	------
	Rn-222[3]		3×10^{-8}	------	3×10^{-9}	------
Rhenium (75)	Re-183	S	3×10^{-6}	2×10^{-2}	9×10^{-8}	6×10^{-4}
		I	2×10^{-7}	8×10^{-3}	5×10^{-9}	3×10^{-4}
	Re-186	S	6×10^{-7}	3×10^{-3}	2×10^{-8}	9×10^{-5}
		I	2×10^{-7}	1×10^{-3}	8×10^{-9}	5×10^{-5}
	Re-187	S	9×10^{-6}	7×10^{-2}	3×10^{-7}	3×10^{-3}
		I	5×10^{-7}	4×10^{-3}	2×10^{-8}	2×10^{-3}
	Re-188	S	4×10^{-7}	2×10^{-4}	1×10^{-8}	6×10^{-5}
		I	2×10^{-7}	9×10^{-4}	6×10^{-9}	3×10^{-5}
Rhodium (45)	Rh-103m	S	8×10^{-5}	4×10^{-1}	3×10^{-6}	1×10^{-2}
		I	6×10^{-5}	3×10^{-1}	2×10^{-6}	1×10^{-2}
	Rh-105	S	8×10^{-7}	4×10^{-3}	3×10^{-8}	1×10^{-4}
		I	5×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
Rubidium (37)	Rb-86	S	3×10^{-7}	2×10^{-3}	1×10^{-8}	7×10^{-5}
		I	7×10^{-8}	7×10^{-4}	2×10^{-9}	2×10^{-5}
	Rb-87	S	5×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
		I	7×10^{-8}	5×10^{-3}	2×10^{-9}	2×10^{-4}
Ruthenium (44)	Ru-97	S	2×10^{-6}	1×10^{-2}	8×10^{-8}	4×10^{-4}
		I	2×10^{-6}	1×10^{-2}	6×10^{-8}	3×10^{-4}
	Ru-103	S	5×10^{-7}	2×10^{-3}	2×10^{-8}	8×10^{-5}
		I	8×10^{-8}	2×10^{-3}	3×10^{-9}	8×10^{-5}
	Ru-105	S	7×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
		I	5×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
	Ru-106	S	8×10^{-8}	4×10^{-4}	3×10^{-9}	1×10^{-5}
		I	6×10^{-9}	3×10^{-4}	2×10^{-10}	1×10^{-5}
Samarium (62)	Sm-147	S	7×10^{-11}	2×10^{-3}	2×10^{-12}	6×10^{-5}
		I	3×10^{-10}	2×10^{-3}	9×10^{-12}	7×10^{-5}
	Sm-151	S	6×10^{-8}	1×10^{-2}	2×10^{-9}	4×10^{-4}
		I	1×10^{-7}	1×10^{-2}	5×10^{-9}	4×10^{-4}
	Sm-153	S	5×10^{-7}	2×10^{-3}	2×10^{-8}	8×10^{-5}
		I	4×10^{-7}	2×10^{-3}	1×10^{-8}	8×10^{-5}
Scandium (21)	Sc-46	S	2×10^{-7}	1×10^{-3}	8×10^{-9}	4×10^{-5}

(See notes at end of appendix)

Element (atomic number)	Isotope[1/]		Table I Column I Air (μCi/ml)	Table I Column 2 Water (μCi/ml)	Table II Column 1 Air (μCi/ml)	Table II Column 2 Water (μCi/ml)
		I	2×10^{-8}	1×10^{-3}	8×10^{-10}	4×10^{-5}
	Sc-47	S	6×10^{-7}	3×10^{-3}	2×10^{-8}	9×10^{-5}
		I	5×10^{-7}	3×10^{-3}	2×10^{-8}	9×10^{-5}
	Sc-48	S	2×10^{-7}	8×10^{-4}	6×10^{-9}	3×10^{-5}
		I	1×10^{-7}	8×10^{-4}	5×10^{-9}	3×10^{-5}
Selenium (34)	Se-75	S	1×10^{-6}	9×10^{-3}	4×10^{-8}	3×10^{-4}
		I	1×10^{-7}	8×10^{-3}	4×10^{-9}	3×10^{-4}
Silicon (14)	Si-31	S	6×10^{-6}	3×10^{-2}	2×10^{-7}	9×10^{-4}
		I	1×10^{-6}	6×10^{-3}	3×10^{-8}	2×10^{-4}
Silver (47)	Ag-105	S	6×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
		I	8×10^{-8}	3×10^{-3}	3×10^{-9}	1×10^{-4}
	Ag-110m	S	2×10^{-7}	9×10^{-4}	7×10^{-9}	3×10^{-5}
		I	1×10^{-8}	9×10^{-4}	3×10^{-10}	3×10^{-5}
	Ag-111	S	3×10^{-7}	1×10^{-3}	1×10^{-8}	4×10^{-5}
		I	2×10^{-7}	1×10^{-3}	8×10^{-9}	4×10^{-5}
Sodium (11)	Na-22	S	2×10^{-7}	1×10^{-3}	6×10^{-9}	4×10^{-5}
		I	9×10^{-9}	9×10^{-4}	3×10^{-10}	3×10^{-5}
	Na-24	S	1×10^{-6}	6×10^{-3}	4×10^{-8}	2×10^{-4}
		I	1×10^{-7}	8×10^{-4}	5×10^{-9}	3×10^{-5}
Strontium (38)	Sr-85m	S	4×10^{-5}	2×10^{-1}	1×10^{-6}	7×10^{-3}
		I	3×10^{-5}	2×10^{-1}	1×10^{-6}	7×10^{-3}
	Sr-85	S	2×10^{-7}	3×10^{-3}	8×10^{-9}	1×10^{-4}
		I	1×10^{-7}	5×10^{-3}	4×10^{-9}	2×10^{-4}
	Sr-89	S	3×10^{-8}	3×10^{-4}	3×10^{-10}	2×10^{-6}
		I	4×10^{-8}	8×10^{-4}	1×10^{-9}	3×10^{-5}
	Sr-90	S	1×10^{-9}	1×10^{-5}	3×10^{-11}	3×10^{-7}
		I	5×10^{-9}	1×10^{-3}	2×10^{-10}	4×10^{-5}
	Sr-91	S	4×10^{-7}	2×10^{-3}	2×10^{-8}	7×10^{-5}
		I	3×10^{-7}	1×10^{-3}	9×10^{-9}	5×10^{-5}
	Sr-92	S	4×10^{-7}	2×10^{-3}	2×10^{-8}	7×10^{-5}
		I	3×10^{-7}	2×10^{-3}	1×10^{-8}	6×10^{-5}
Sulfur (16)	S-35	S	3×10^{-7}	2×10^{-3}	9×10^{-9}	6×10^{-5}
		I	3×10^{-7}	8×10^{-3}	9×10^{-9}	3×10^{-4}
Tantalum (73)	Ta-182	S	4×10^{-8}	1×10^{-3}	1×10^{-9}	4×10^{-5}
		I	2×10^{-8}	1×10^{-3}	7×10^{-10}	4×10^{-5}
Technetium (43)	Tc-96m	S	8×10^{-5}	4×10^{-1}	3×10^{-6}	1×10^{-2}
		I	3×10^{-5}	3×10^{-1}	1×10^{-6}	1×10^{-2}
	Tc-96	S	6×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
		I	2×10^{-7}	1×10^{-3}	8×10^{-9}	5×10^{-5}
	Tc-97m	S	2×10^{-6}	1×10^{-2}	8×10^{-8}	4×10^{-4}
		I	2×10^{-7}	5×10^{-3}	5×10^{-9}	2×10^{-4}
	Tc-97	S	1×10^{-5}	5×10^{-2}	4×10^{-7}	2×10^{-3}
		I	3×10^{-7}	5×10^{-2}	4×10^{-8}	2×10^{-4}
	Tc-99m	S	4×10^{-5}	2×10^{-1}	1×10^{-6}	8×10^{-3}
		I	1×10^{-5}	2×10^{-1}	1×10^{-6}	6×10^{-3}
	Tc-99	S	2×10^{-6}	8×10^{-2}	5×10^{-8}	3×10^{-3}
		I	6×10^{-8}	1×10^{-2}	7×10^{-9}	3×10^{-4}
Tellurium (52)	Te-125m	S	4×10^{-7}	5×10^{-3}	2×10^{-9}	2×10^{-4}
		I	1×10^{-7}	3×10^{-3}	1×10^{-8}	2×10^{-4}
	Te-127m	S	1×10^{-7}	3×10^{-3}	4×10^{-9}	1×10^{-4}
		I	1×10^{-8}	2×10^{-3}	5×10^{-9}	6×10^{-5}
	Te-127	S	4×10^{-6}	2×10^{-3}	1×10^{-8}	5×10^{-5}
		I	2×10^{-7}	8×10^{-3}	6×10^{-8}	3×10^{-4}
			9×10^{-7}	5×10^{-3}	3×10^{-8}	2×10^{-4}

(See notes at end of appendix)

Element (atomic number)	Isotope[1]		Table I Column I Air (μCi/ml)	Table I Column 2 Water (μCi/ml)	Table II Column 1 Air (μCi/ml)	Table II Column 2 Water (μCi/ml)
	Te-129m	S	8×10^{-8}	1×10^{-3}	3×10^{-9}	3×10^{-5}
		I	3×10^{-8}	6×10^{-4}	1×10^{-9}	2×10^{-5}
	Te-129	S	5×10^{-6}	2×10^{-2}	2×10^{-7}	8×10^{-4}
		I	4×10^{-6}	2×10^{-2}	1×10^{-7}	8×10^{-4}
	Te-131m	S	4×10^{-7}	2×10^{-3}	1×10^{-8}	6×10^{-5}
		I	2×10^{-7}	1×10^{-3}	6×10^{-9}	4×10^{-5}
	Te-132	S	2×10^{-7}	9×10^{-4}	7×10^{-9}	3×10^{-5}
		I	1×10^{-7}	6×10^{-4}	4×10^{-9}	2×10^{-5}
Terbium (65)	Tb-160	S	1×10^{-7}	1×10^{-3}	3×10^{-9}	4×10^{-5}
		I	3×10^{-8}	1×10^{-3}	1×10^{-9}	4×10^{-5}
Thallium (81)	Tl-200	S	3×10^{-6}	1×10^{-2}	9×10^{-8}	4×10^{-4}
		I	1×10^{-6}	7×10^{-3}	4×10^{-8}	2×10^{-4}
	Tl-201	S	2×10^{-6}	9×10^{-3}	7×10^{-8}	3×10^{-4}
		I	9×10^{-7}	5×10^{-3}	3×10^{-8}	2×10^{-4}
	Tl-202	S	8×10^{-7}	4×10^{-3}	3×10^{-8}	1×10^{-4}
		I	2×10^{-7}	2×10^{-3}	8×10^{-9}	7×10^{-5}
	Tl-204	S	6×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
		I	3×10^{-8}	2×10^{-3}	9×10^{-10}	6×10^{-5}
Thorium (90)	Th-227	S	3×10^{-10}	5×10^{-4}	1×10^{-11}	2×10^{-5}
		I	2×10^{-10}	5×10^{-4}	6×10^{-12}	2×10^{-5}
	Th-228	S	9×10^{-12}	2×10^{-4}	3×10^{-13}	7×10^{-6}
		I	6×10^{-12}	4×10^{-4}	2×10^{-13}	1×10^{-5}
	Th-230	S	2×10^{-12}	5×10^{-5}	8×10^{-14}	2×10^{-6}
		I	1×10^{-11}	9×10^{-4}	3×10^{-13}	3×10^{-5}
	Th-231	S	1×10^{-6}	7×10^{-3}	5×10^{-8}	2×10^{-4}
		I	1×10^{-6}	7×10^{-3}	4×10^{-8}	2×10^{-4}
	Th-232	S	3×10^{-11}	5×10^{-5}	1×10^{-12}	2×10^{-6}
		I	3×10^{-11}	1×10^{-3}	1×10^{-12}	4×10^{-5}
	Th-natural	S	6×10^{-11}	6×10^{-5}	2×10^{-12}	2×10^{-6}
		I	6×10^{-11}	6×10^{-4}	2×10^{-12}	2×10^{-5}
	Th-234	S	6×10^{-8}	5×10^{-4}	2×10^{-9}	2×10^{-5}
		I	3×10^{-8}	5×10^{-4}	1×10^{-9}	2×10^{-5}
Thulium (69)	Tm-170	S	4×10^{-8}	1×10^{-3}	1×10^{-9}	5×10^{-5}
		I	3×10^{-8}	1×10^{-3}	1×10^{-9}	5×10^{-5}
	Tm-171	S	1×10^{-7}	1×10^{-2}	4×10^{-9}	5×10^{-4}
		I	2×10^{-7}	1×10^{-2}	8×10^{-9}	5×10^{-4}
Tin (50)	Sn-113	S	4×10^{-7}	2×10^{-3}	1×10^{-8}	9×10^{-5}
		I	5×10^{-8}	2×10^{-3}	2×10^{-9}	8×10^{-5}
	Sn-125	S	1×10^{-7}	5×10^{-4}	4×10^{-9}	2×10^{-5}
		I	8×10^{-8}	5×10^{-4}	3×10^{-9}	2×10^{-5}
Tungsten (74)	W-181	S	2×10^{-6}	1×10^{-2}	8×10^{-8}	4×10^{-4}
		I	1×10^{-7}	1×10^{-2}	4×10^{-9}	3×10^{-4}
	W-185	S	8×10^{-7}	4×10^{-3}	3×10^{-8}	1×10^{-4}
		I	1×10^{-7}	3×10^{-3}	4×10^{-9}	1×10^{-4}
	W-187	S	4×10^{-7}	2×10^{-3}	2×10^{-8}	7×10^{-5}
		I	3×10^{-7}	2×10^{-3}	1×10^{-8}	6×10^{-5}
Uranium (92)	U-230	S	3×10^{-10}	1×10^{-4}	1×10^{-11}	5×10^{-6}
		I	1×10^{-10}	1×10^{-4}	4×10^{-12}	5×10^{-6}
	U-232	S	1×10^{-10}	8×10^{-4}	3×10^{-12}	3×10^{-5}
		I	3×10^{-11}	8×10^{-4}	9×10^{-13}	3×10^{-5}
	U-233	S	5×10^{-10}	9×10^{-4}	2×10^{-11}	3×10^{-5}
		I	1×10^{-10}	9×10^{-4}	4×10^{-12}	3×10^{-5}
	U-234	S[4]	6×10^{-10}	9×10^{-4}	2×10^{-11}	3×10^{-5}
		I	1×10^{-10}	9×10^{-4}	4×10^{-12}	3×10^{-5}

(See notes at end of appendix)

Element (atomic number)	Isotope[1]		Table I Column 1 Air (μCi/ml)	Table I Column 2 Water (μCi/ml)	Table II Column 1 Air (μCi/ml)	Table II Column 2 Water (μCi/ml)
	U-235	S[4]	5×10^{-10}	8×10^{-4}	2×10^{-11}	3×10^{-5}
		I	1×10^{-10}	8×10^{-4}	4×10^{-12}	3×10^{-5}
	U-236	S	6×10^{-10}	1×10^{-3}	2×10^{-11}	3×10^{-5}
		I	1×10^{-10}	1×10^{-3}	4×10^{-12}	3×10^{-5}
	U-238	S[4]	7×10^{-11}	1×10^{-3}	3×10^{-12}	4×10^{-5}
		I	1×10^{-10}	1×10^{-3}	5×10^{-12}	4×10^{-5}
	U-240	S	2×10^{-7}	1×10^{-3}	8×10^{-9}	3×10^{-5}
		I	2×10^{-7}	1×10^{-3}	6×10^{-9}	3×10^{-5}
	U-natural	S[4]	1×10^{-10}	1×10^{-3}	5×10^{-12}	3×10^{-5}
		I	1×10^{-10}	1×10^{-3}	5×10^{-12}	3×10^{-5}
Vanadium (23)	V-48	S	2×10^{-7}	9×10^{-4}	6×10^{-9}	3×10^{-5}
		I	6×10^{-8}	8×10^{-4}	2×10^{-9}	3×10^{-5}
Xenon (54)	Xe-131m	Sub[2]	2×10^{-5}	------	4×10^{-7}	------
	Xe-133m	Sub	1×10^{-5}	------	3×10^{-7}	------
	Xe-133	Sub	1×10^{-5}	------	3×10^{-7}	------
	Xe-135	Sub	4×10^{-6}	------	1×10^{-7}	------
Ytterbium (70)	Yb-175	S	7×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
		I	6×10^{-7}	3×10^{-3}	2×10^{-8}	1×10^{-4}
Yttrium (39)	Y-90	S	1×10^{-7}	6×10^{-4}	4×10^{-9}	2×10^{-5}
		I	1×10^{-7}	6×10^{-4}	3×10^{-9}	2×10^{-5}
	Y-19m	S	2×10^{-5}	1×10^{-1}	8×10^{-7}	3×10^{-3}
		I	2×10^{-5}	1×10^{-1}	6×10^{-7}	3×10^{-3}
	Y-91	S	4×10^{-8}	8×10^{-4}	1×10^{-9}	3×10^{-5}
		I	3×10^{-8}	8×10^{-4}	1×10^{-9}	3×10^{-5}
	Y-92	S	4×10^{-7}	2×10^{-3}	1×10^{-8}	6×10^{-5}
		I	3×10^{-7}	2×10^{-3}	1×10^{-8}	6×10^{-5}
	Y-93	S	2×10^{-7}	8×10^{-4}	6×10^{-9}	3×10^{-5}
		I	1×10^{-7}	8×10^{-4}	5×10^{-9}	3×10^{-5}
Zinc (30)	Zn-65	S	1×10^{-7}	3×10^{-3}	4×10^{-9}	1×10^{-4}
		I	6×10^{-8}	5×10^{-3}	2×10^{-9}	2×10^{-4}
	Zn-69m	S	4×10^{-7}	2×10^{-3}	1×10^{-8}	7×10^{-5}
		I	3×10^{-7}	2×10^{-3}	1×10^{-8}	6×10^{-5}
	Zn-69	S	7×10^{-6}	5×10^{-2}	2×10^{-7}	2×10^{-3}
		I	9×10^{-6}	5×10^{-2}	3×10^{-7}	2×10^{-3}
Zirconium (40)	Zr-93	S	1×10^{-7}	2×10^{-2}	4×10^{-9}	8×10^{-4}
		I	3×10^{-7}	2×10^{-2}	1×10^{-8}	8×10^{-4}
	Zr-95	S	1×10^{-7}	2×10^{-3}	4×10^{-9}	6×10^{-5}
		I	3×10^{-8}	2×10^{-3}	1×10^{-9}	6×10^{-5}
	Zr-97	S	1×10^{-7}	5×10^{-4}	4×10^{-9}	2×10^{-5}
		I	9×10^{-8}	5×10^{-4}	3×10^{-9}	2×10^{-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[2]	1×10^{-6}	------	3×10^{-8}	------
Any single radionuclide not listed above with decay mode other than			3×10^{-9}	9×10^{-5}	1×10^{-10}	3×10^{-6}

(See notes at end of appendix)

Element (atomic number)	Isotope[1/]	Table I Column I Air (μCi/ml)	Table I Column 2 Water (μCi/ml)	Table II Column 1 Air (μCi/ml)	Table II Column 2 Water (μCi/ml)
alpha emission or spontaneous fission and with radioactive half-life greater than 2 hours.					
Any single radionuclide not listed above, which decays by alpha emission or spontaneous fission.		6×10^{-13}	4×10^{-7}	2×10^{-14}	3×10^{-8}

1/ Soluble (S); Insoluble (I).

2/ "Sub" means that values given are for submersion in a semi-spherical infinite cloud of airborne material.

3/ These radon concentrations are appropriate for protection from radon-222 combined with its short-lived daughters. Alternatively, the value in Table I may be replaced by one-third (1/3) "working level." (A "working level" is defined as any combination of short-lived radon-222 daughters, polonium-218, lead-214, bismuth-214, and polonium-214, in one liter of air, without regard to the degree of equilibrium, that will result in the ultimate emission of 1.3×10^5 MeV of alpha particle energy.) The Table II value may be replaced by one-thirtieth (1/30) of a "working level." The limit on radon-222 concentrations in restricted areas may be based on an annual average.

4/ For soluble mixtures of U-238, U-234, and U-235 in air chemical toxicity may be the limiting factor. If the percent by weight (enrichment) of U-235 is less than 5, the concentration value for a 40-hour workweek, Table I, is 0.2 milligrams uranium per cubic meter of air average. For any enrichment, the product of the average concentration and time of exposure during a 40-hour workweek shall not exceed 8×10^{-3} SA, μCi-hr/ml, where SA is the specific activity of the uranium inhaled. The concentration value for Table II is 0.007 milligrams uranium per cubic meter of air. The specific activity for natural uranium is 6.77×10^{-7} curies per gram U. The specific activity for other mixtures of U-238, U-235, and U-234, if not known, shall be:

$$SA = 3.6 \times 10^{-7} \text{ curies/gram U} \qquad \text{U-depleted}$$
$$SA = (0.4 + 0.38\,E + 0.0034\,E^2)\,10^{-6} \qquad E \geq 0.72$$

where E is the percentage by weight of U-235, expressed as percent.

Note: In any case where there is a mixture in air or water of more than one radionuclide, the limiting values for purposes of this Appendix 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 ratio between the quantity present in the mixture and the limit otherwise established in Appendix "A" of 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").

(See notes at end of appendix)

Example: If radionuclides a, b, and c are present in concentrations C_a, C_b, and C_c, and if the applicable MPC's are MPC_a, MPC_b, and MPC_c, respectively, then the concentrations shall be limited so that the following relationship exists:

$$\frac{C_a}{MPC_a} + \frac{C_b}{MPC_b} + \frac{C_c}{MPC_c} \leq 1$$

2. If either the identity or the concentration of any radionuclide in the mixture is not known, the limiting values for purposes of Appendix "A" shall be:

a. For purposes of Table I, Col. 1 . . . . . 6×10^{-13}
b. For purposes of Table I, Col. 2 . . . . . 4×10^{-7}
c. For purposes of Table II, Col. 1 . . . . . 2×10^{-14}
d. For purposes of Table II, Col. 2 . . . . . 3×10^{-8}

3. If any of the conditions specified below are met, the corresponding values specified below may be used in lieu of those specified in paragraph 2 above.

a. If the identity of each radionuclide in the mixture is known but the concentration of one or more of the radionuclides in the mixture is not known, the concentration limit for the mixture is the limit specified in Appendix "A" 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 Appendix "A" are not present in the mixture, the concentration limit for the mixture is the lowest concentration limit specified in Appendix "A" for any radionuclide which is not known to be absent from the mixture; or

c. Radionuclide

	Table I		Table II	
	Column 1 Air (μCi/ml)	Column 2 Water (μCi/ml)	Column 1 Air (μCi/ml)	Column 2 Water (μCi/ml)
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--	------	9×10^{-5}	------	3×10^{-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----------	------	6×10^{-5}	------	2×10^{-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--	------	2×10^{-5}	------	6×10^{-7}
If it is known that (I-129, Table II only), Ra-226, and Ra-228 are not present----------	------	3×10^{-6}	------	1×10^{-7}

c. Radionuclide	Table I		Table II	
	Column 1 Air (μCi/ml)	Column 2 Water (μCi/ml)	Column 1 Air (μCi/ml)	Column 2 Water (μCi/ml)
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	3×10^{-9}	------	1×10^{-10}	------
If it is known that alpha-emitters and Pb-210, Ac-227, Ra-228, and Pu-241 are not present	3×10^{-10}	------	1×10^{-11}	------
If it is known that alpha-emitters and Ac-227 are not present	3×10^{-11}	------	1×10^{-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	3×10^{-12}	------	1×10^{-13}	------

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 paragraph 1 above or those specified in paragraphs 2 and 3 above.

   a. For purposes of Table I, Column 1, 1×10^{-10} μCi/ml gross alpha activity; or 5×10^{-11} μCi/ml natural uranium; or 75 micrograms per cubic meter of air natural uranium.

   b. For purposes of Table II, Column 1, 3×10^{-12} μCi/ml gross alpha activity; 2×10^{-12} μCi/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 Appendix "A" (MPC_a) does not exceed 1/10, (i.e., $C_a/MPC_a \leq 1/10$ and (b) the sum of such ratios for all radionuclides considered as not present in the mixture does not exceed 1/4, (i.e., $C_a/MPC_a + C_b/MPC_b + \ldots \geq 1/4$).

History: Amended effective October 1, 1982.

33-10-05-03. Definitions. As used in this chapter:

1. "Cabinet radiography using radiation machines" means industrial radiography using radiation machines, which is conducted in an enclosed, interlocked cabinet, such that the radiation machine will not operate unless all openings are securely closed, and which cabinet is so shielded that every location on the exterior meets conditions for an unrestricted area as specified in subsection 5 of section 33-10-04-02.

2. "Industrial radiography" means the examination of the macroscopic structure of materials by nondestructive methods utilizing sources of radiation.

3. "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 this chapter and all license conditions.

4. "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.

5. "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.

6. "Shielded room radiography using radiation machines" means industrial radiography using radiation machines, which is conducted in an enclosed room, the interior of which is not occupied during radiographic operations, which is so shielded that every location on the exterior meets conditions for an unrestricted area as specified in subsection 5 of section 33-10-04-02, and the only access to which is through openings which are interlocked so that the radiation machine will not operate unless all openings are securely closed.

7. "Storage container" means a device in which sealed sources are transported or stored.

1. "Enclosed radiography" means industrial radiography conducted in an enclosed cabinet or room and includes cabinet radiography and shielded room radiography.

   a. "Cabinet radiography" means industrial radiography conducted in an enclosure or cabinet so shielded that every location on the exterior meets the conditions specified in subsection 5 of section 33-10-04-02.

      (1) "Cabinet X-ray system" means an X-ray system with the X-ray tube installed in an enclosure (hereinafter termed "cabinet") which, independently of existing architectural structures except the floor on which it may be placed, is intended to contain at least that portion of a material being irradiated, provide radiation attenuation, and exclude personnel from its interior during generation of x radiation. Included are all X-ray systems designed primarily for the inspection of carry-on baggage at airline, railroad, and bus terminals, and in similar facilities. An X-ray tube used within a shielded part of a building, or X-ray equipment which may temporarily or occasionally incorporate portable shielding is not considered a cabinet X-ray system.

      (2) "Certified cabinet X-ray system" means an X-ray system which has been certified in accordance with 21 CFR 1010.2 as being manufactured and assembled pursuant to the provisions of 21 CFR 1020.40.

   b. "Shielded-room radiography" means industrial radiography conducted in a room so shielded that every location on the exterior meets the conditions specified in subsection 5 of section 33-10-04-02.

2. "Industrial radiography" means the examination of the macroscopic structure of materials by nondestructive methods utilizing sources of radiation.

3. "Permanent radiographic installation" means a shielded installation or structure designed or intended for radiography and in which radiography is regularly performed.

4. "Personal supervision" means supervision such that the supervisor is physically present at the radiography site and in such proximity that contact can be maintained and immediate assistance given as required.

5. "Radiographer" means any individual who performs, or provides personal supervision of, industrial radiographic operations and who is responsible to the licensee or registrant for assuring compliance with the requirements of these regulations and all license (or certificate of registration) conditions.

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

7. "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.

8. "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.

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

10. "Storage container" means a device in which sealed sources are transported or stored.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-05-04. Equipment control.

1. Limits on levels of radiation for radiographic exposure devices and storage containers. Radiographic exposure devices measuring less than four inches [10 centimeters] from the sealed source storage position to any exterior surface of the device shall have no radiation level in excess of fifty milliroentgens per hour at six inches [15 centimeters] from any exterior surface of the device. Radiographic exposure devices measuring a minimum of four inches [10 centimeters] 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 two hundred milliroentgens per hour at any exterior surface, and ten milliroentgens per hour at one meter from any exterior surface. The radiation levels specified are with the sealed source in the shielded (i.e., "off") position.

~~2. Locking of sources of radiation. 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 pursuant to subsection 1 of section 33-10-05-06. Each storage container likewise shall be provided with a lock and kept locked when containing sealed sources except when the container is under the direct surveillance of a radiographer or radiographer's assistant.~~

2. Locking of sources of radiation.

   a. 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 pursuant to subsection 1 of section 33-10-05-06. Each storage container and source changer likewise shall be provided with a lock and kept locked when containing sealed sources except when the container is under the direct surveillance of a radiographer or radiographer's assistant.

   b. Radiographic exposure devices, source changers, and storage containers, prior to being moved from one location to another and also prior to being secured to a given location, shall be locked and surveyed to assure that the sealed source is in the shielded position.

3. Storage precautions. Locked radiographic exposure devices and storage containers shall be physically secured to prevent tampering or removal by unauthorized personnel.

4. Radiation survey instruments. The licensee or registrant shall maintain sufficient calibrated and operable radiation survey instruments to make physical radiation surveys as required by this chapter and chapter 33-10-04. Each radiation survey instrument shall be calibrated at intervals not to exceed three months and after each instrument servicing and a record maintained of the latest date of calibration. Instrumentation required by this subsection shall have a range such that two milliroentgens per hour through one roentgen per hour can be measured.

5. Leak testing, repair, tagging, opening, modification, and replacement of sealed sources.

   a. 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 department, the United States nuclear regulatory commission, or any agreement state.

b. Each sealed source shall be tested for leakage at intervals not to exceed six months. In the absence of a certificate from a transferor that a test has been made within the six-month period prior to the transfer, the sealed source shall not be put into use until tested.

c. The leak test shall be capable of detecting the presence of five-thousandths microcurie of removable contamination on the sealed source. An acceptable leak test for sealed sources in the possession of a radiography licensee would be to test at the nearest accessible point to the sealed source storage position, or other appropriate measuring point, by a procedure to be approved pursuant to paragraph 5 of subdivision e of subsection 3 of section 33-10-03-05. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the department.

d. Any test conducted pursuant to subdivisions b and c which reveals the presence of five-thousandths microcurie or more of removable radioactive material shall be considered evidence that the sealed source is leaking. The licensee shall immediately withdraw the equipment involved from use and shall cause it to be decontaminated and repaired or to be disposed of, in accordance with regulations of the department. Within five days after obtaining results of the test, the licensee shall file a report with the department describing the equipment involved, the test results, and the corrective action taken.

e. 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 inch [2.54 centimeters] 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".

6. Quarterly inventory. Each licensee shall conduct a quarterly physical inventory to account for all sealed sources received or possessed by the licensee. The records of the inventories shall be maintained for inspection by the department and shall include the quantities and kinds of radioactive material, the location of sealed sources, and the date of the inventory.

7. Utilization logs. Each licensee or registrant shall maintain current logs, which shall be kept available for inspection by

the department showing for each source of radiation the following information:

a. A description (or make and model number) of each source of radiation or storage container in which the sealed source is located.

b. The identity of the radiographer to whom assigned.

c. Locations where used and dates of use.

~~8. Inspection and maintenance of radiographic exposure devices and storage containers. The licensee shall conduct a program for inspection and maintenance of radiographic exposure devices and storage containers to assure proper functioning of components important to safety.~~

8. Inspection and maintenance of radiographic exposure devices, storage containers, and source changers.

a. The licensee shall check for obvious defects in radiographic devices, storage containers, and source changers prior to use each day the equipment is used.

b. The licensee shall conduct a program for inspection and maintenance of radiographic exposure devices, storage containers, and source changers at intervals not to exceed three months or prior to the first use thereafter, to assure proper functioning of components important to safety. All appropriate parts shall be maintained in accordance with the manufacturer's specifications. Records of inspection and maintenance shall be maintained for inspection by the department until it authorizes their disposal.

c. If any inspection conducted pursuant to subdivision a or b reveals damage to components critical to radiation safety, the device shall be removed from service until repairs have been made.

9. Permanent radiographic installations. Permanent radiographic installations having high radiation area entrance controls of the types described in subsection 3 of section 33-10-05-05 shall also meet the following requirements:

a. Each entrance that is used for personnel access to the high radiation area in a permanent radiographic installation shall have both visible and audible warning signals to warn the presence of radiation. The visible signal shall be activated by radiation whenever the source is exposed. The audible signal shall be actuated when an

attempt is made to enter the installation while the source is exposed.

b. A control device or alarm system shall be tested for proper operation at the beginning of each period of use. Records of such tests shall be maintained for inspection by the department until it authorizes their disposal.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-05-05. Personal radiation safety requirements for radiographers and radiographers' assistants.

~~1. Limitations.~~

~~a. No licensee or registrant shall permit any individual to act as a radiographer as defined in this chapter until such individual has done all of the following:~~

~~(1) Been instructed in the subjects outlined in Appendix A of this chapter and have demonstrated understanding thereof.~~

~~(2) Received copies of an instruction in this chapter and the applicable sections of chapters 33-10-04 and 33-10-10, appropriate license or licenses, and the licensee's or registrant's operating and emergency procedures, and have demonstrated understanding thereof.~~

~~(3) Demonstrated competence to use the source of radiation, related handling tools, and survey instruments which will be employed in the individual's assignment.~~

~~b. No licensee or registrant shall permit any individual to act as a radiographer's assistant as defined in this regulation until such individual:~~

~~(1) Has received copies of and instruction in the licensee's or registrant's operating and emergency procedures, and shall have demonstrated understanding thereof, and~~

~~(2) Has demonstrated competence to use under the personal supervision of the radiographer the sources of radiation, related handling~~

~~tools, and radiation survey instruments which will be employed in his assignment.~~

1. Training.

a. The licensee or registrant shall not permit any individual to act as a radiographer until such individual:

(1) Has been instructed in the subjects outlined in Appendix A of this part;

(2) Has received copies of and instruction in department regulations contained in this part and in the applicable sections of chapters 33-10-04 and 33-10-10, department license under which the radiographer will perform radiography, and the licensee's operating and emergency procedures;

(3) Has demonstrated competence to use the licensee's radiographic exposure devices, sealed sources, related handling tools, and survey instruments; and

(4) Has demonstrated understanding of the instructions in this paragraph by successful completion of a written test and a field examination on the subjects covered.

b. The licensee or registrant shall not permit any individual to act as a radiographer's assistant until such individual:

(1) Has received copies of and instruction in the licensee's operating and emergency procedures;

(2) Has demonstrated competence to use, under the personal supervision of the radiographer, the radiographic exposure devices, sealed sources, related handling tools, and radiation survey instruments that the assistant will use; and

(3) Has demonstrated understanding of the instructions in this paragraph by successfully completing a written or oral test and a field examination on the subjects covered.

c. Records of the above training, including copies of written tests and dates of oral tests and field examinations, shall be maintained for three years.

d. Each licensee or registrant shall conduct an internal audit program to ensure that the department's radioactive material license conditions and the licensee's or registrant's operating and emergency procedures are followed by each radiographer and radiographer's

assistant. These internal audits shall be performed at least quarterly, and each radiographer shall be audited at least annually. Records of internal audits shall be maintained for inspection by the department for two years from the date of the audit.

2. Operating and emergency procedures. The licensee's or registrant's operating and emergency procedures shall include instructions in at least the following:

   a. 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 chapter 33-10-04.

   b. Methods and occasions for conducting radiation surveys.

   c. Methods for controlling access to radiographic areas.

   d. Methods and occasions for locking and securing sources of radiation.

   e. 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.

   f. Transportation to field locations, including packing of sources of radiation in the vehicles, posting of vehicles, and control of sources of radiation during transportation.

   g. Minimizing exposure of individuals in the event of an accident.

   h. The procedure for notifying proper personnel in the event of an accident.

   i. Maintenance of records.

   j. The inspection and maintenance of radiographic exposure devices and storage containers.

3. Personnel monitoring control.

   a. No licensee or registrant shall permit any individual to act as a radiographer or as a radiographer's assistant unless, at all times during radiographic operations, each such individual shall wear a direct-reading pocket dosimeter and either film badge or a thermoluminescent dosimeter badge. Pocket dosimeters shall have a range from zero to at least two hundred milliroentgens and shall be recharged daily or at the start of each shift. A ~~badge shall be assigned to and worn by only one~~

~~individual.~~ Each badge and thermoluminescent dosimeter shall be assigned to and worn by only one individual.

~~b. Pocket dosimeters shall be read and exposures recorded daily. An individual's badge shall be immediately processed if a pocket dosimeter is discharged beyond its range. Reports received from the badge processor and records of pocket dosimeter readings shall be maintained for inspection by the department.~~

b. Pocket dosimeters shall be read and exposures recorded daily.

c. Pocket dosimeters shall be checked at periods not to exceed one year for correct response to radiation. Acceptable dosimeters shall read within plus or minus thirty percent of the true radiation exposed.

d. An individual's film badge or thermoluminescent dosimeter shall be immediately processed if a pocket dosimeter is discharged beyond its range.

e. Reports received from the badge or thermoluminescent dosimeter processor and records of pocket dosimeter readings shall be maintained for inspection by the department.

4. Supervision of radiographer's assistants. Whenever a radiographer's assistant uses radiographic exposure devices, uses sealed sources or related source handling tools, or conducts radiation surveys required by subsection 3 of section 33-10-05-06 to determine that the sealed source has returned to the shielded position after an exposure, the assistant shall be under the personal supervision of a radiographer. The personal supervision shall include:

a. The radiographer's personal presence at the site where the sealed sources are being used.

b. The ability of the radiographer to give immediate assistance if required.

c. The radiographer's watching the assistant's performance of the operations referred to in this section.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-05-06. Precautionary procedures in radiographic operations.

1. 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, as defined in chapter 33-10-01, except (a) where the high radiation area is equipped with a control device or alarm system as described in paragraph (2) of subdivision c of subsection 3 of section 33-10-04-03, or (b) where the high radiation area is locked to protect against unauthorized or accidental entry.

2. Posting. Notwithstanding any provisions in subdivision c of subsection 4 of section 33-10-04-03, areas in which radiography is being performed shall be conspicuously posted as required by paragraph (1) of subdivision c of subsection 3 of section 33-10-04-03 and subdivision b of subsection 3 of section 33-10-04-03.

3. Radiation surveys and survey records.

   a. No radiographic operation shall be conducted unless calibrated and operable radiation survey instrumentation as described in subsection 4 of section 33-10-05-04 is available and used at each site where radiographic exposures are made.

   ~~b. A physical radiation survey shall be made after each radiographic exposure utilizing radiographic exposure devices or sealed sources of radioactive material to determine that the sealed source has been returned to its shielded condition.~~

   ~~c. 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 as specified in subsection 2 of section 33-10-05-04.~~

   ~~d. Records shall be kept of the surveys required by subdivision c and maintained for inspection by the department.~~

   b. A survey with a radiation survey instrument shall be made after each radiographic exposure to determine that the sealed source has been returned to its shielded position. The entire circumference of the radiographic exposure device shall be surveyed. If the radiographic exposure device has a source guide tube, the survey shall include the guide tube.

   c. A record of the survey required in subdivision b shall be maintained for inspection by the department when the

survey is the last survey prior to locking the radiographic exposure device and ending direct surveillance of the operation.

~~4.~~ ~~Special requirements for radiography employing radiation machines.~~

~~a.~~ ~~Cabinet radiography.~~ ~~Cabinet radiography using radiation machines, as defined in subsection 1 of section 33-10-05-03 shall be exempt from other requirements of this chapter, however, no registrant shall permit any individual to operate a cabinet radiography unit until such individual has received a copy of, and instruction in, and demonstrated an understanding of operating procedures for the unit, and has demonstrated competence in its use.~~

~~b.~~ ~~Shielded room radiography.~~ ~~Shielded room radiography using radiation machines, as defined in subsection 6 of section 33-10-05-03, shall be exempt from other requirements of this chapter, however:~~

~~(1)~~ ~~No registrant shall permit any individual to operate a radiation machine for shielded room radiography until such individual has received a copy of, and instruction in, and demonstrated an understanding of operating procedures for the unit, and has demonstrated competence in its use.~~

~~(2)~~ ~~Each registrant shall supply appropriate personnel monitoring equipment to, and shall require the use of such equipment by, every individual who operates, who makes "setups", or who performs maintenance on a radiation machine for shielded room radiography.~~

~~(3)~~ ~~A physical radiation survey shall be conducted to determine that the radiation machine is "off" prior to each entry into the shielded room. Such surveys shall be made with a radiation measuring instrument which is capable of measuring radiation of the energies and at the exposure rates to be encountered, which is in good working order, and which has been properly calibrated within the preceding three months or following the last instrument servicing, whichever is later.~~

~~e. Other radiography using radiation machines. Other radiography using radiation machines shall be exempt from subsections 1, 3, 5, and 6 of section 33-10-05-04 and subsection 3 of this section, however:~~

~~(1) A physical radiation survey shall be conducted to determine that the radiation machine is "off" prior to each entry into the radiographic exposure area. Such surveys shall be made with a radiation measuring instrument capable of measuring radiation of the energies and at the exposure rates to be encountered, which is in good working order, and which has been properly calibrated within the preceding three months or following the last instrument servicing, whichever is later. Survey results and records of boundary locations shall be maintained and kept available for inspection.~~

~~(2) Mobile or portable radiation machines shall be physically secured to prevent removal by unauthorized personnel.~~

4. Records 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 department:

   a. Appropriate license or certificate of registration or equivalent document.

   b. Operating and emergency procedures.

   c. Applicable regulations.

   d. Survey records required pursuant to subsection 3 for the period of operation at the site.

   e. Daily pocket dosimeter records for the period of operation at the site.

   f. The latest instrument calibration and leak test record for specific devices in use at the site.

5. Special requirements and exemptions for enclosed radiography.

   a. Systems for enclosed radiography designed to allow admittance of individuals shall:

(1) Comply with all applicable requirements of this part and subsection 5 of section 33-10-04-02. If such a system is a certified cabinet X-ray system, it shall comply with all applicable requirements of this part and 21 CFR 1020.40.

(2) Be evaluated at intervals not to exceed one year to assure compliance with the applicable requirements as specified in paragraph 1. Records of these evaluations shall be maintained for inspection by the department for a period of two years after the evaluation.

b. Cabinet X-ray systems designed to exclude individuals are exempt from the requirements of this part except that:

(1) Operating personnel must be provided with either a film badge or a thermoluminescent dosimeter and reports of the results must be maintained for inspection by the department.

(2) No registrant shall permit any individual to operate a cabinet X-ray system until such individual has received a copy of and instruction in the operating procedures for the unit and has demonstrated competence in its use. Records which demonstrate compliance with this subparagraph shall be maintained for inspection by the agency until disposition is authorized by the department.

(3) Tests for proper operation of high radiation area control devices or alarm systems, where applicable, must be conducted and recorded in accordance with subsection 9 of section 33-10-05-04.

(4) The registrant shall perform an evaluation at intervals not to exceed one year, to determine conformance with subsection 5 of section 33-10-05-04. If such a system is a certified cabinet X-ray system, it shall be evaluated at intervals not to exceed one year to determine conformance with 21 CFR 1020.40. Records of these evaluations shall be maintained for inspection by the department for a period of two years after the evaluation.

c. Certified cabinet X-ray systems shall be maintained in compliance with 21 CFR 1020.40 unless prior approval has been granted by the department pursuant to subsection 1 of section 33-10-01-05.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

Appendix A

Subjects to be Covered During the Instruction of Radiographers

1. Fundamentals of radiation safety.

   a. Characteristics of gamma and x radiation.

   b. Units of radiation dose (mrem) and quantity of radioactivity (curie).

   c. 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.~~

~~5. The licensee's or registrant's written operating and emergency procedures.~~

APPENDIX A

SUBJECTS TO BE COVERED DURING
THE INSTRUCTION OF RADIOGRAPHERS

1. Fundamentals of radiation safety

   a. Characteristics of radiation

   b. Units of radiation dose (mrem) and quantity of radioactivity (curie)

   c. Significance of radiation dose

      (1) Radiation protection standards

      (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 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) Thermoluminescent dosimeters

(3) Pocket 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

5. The licensee's or registrant's written operating and emergency procedures

6. Case histories of radiography accidents

History: Amended effective October 1, 1982.
STAFF COMMENT: Additions and deletions to Chapter 33-10-06 are not identified by overstrike and underscore.

CHAPTER 33-10-06
X-RAYS IN THE HEALING ARTS

Section	
33-10-06-01	Scope
33-10-06-02	Definitions
33-10-06-03	General Requirements
33-10-06-04	General Requirements for All Diagnostic X-ray Systems
33-10-06-05	Fluoroscopic X-ray Systems
33-10-06-06	Radiographic Systems Other Than Fluoroscopic, Dental Intraoral, or Veterinarian Systems
33-10-06-07	Intraoral Dental Radiographic Systems
33-10-06-08	Therapeutic X-ray Systems of Less Than One Megaelectronvolt
33-10-06-09	X-Ray and Electron Therapy Systems With Energies of One Megaelectronvolt and Above
33-10-06-10	Veterinary Medicine Radiographic Installations

33-10-06-01. Scope. This chapter establishes requirements, for which a registrant is responsible, for use of X-ray equipment by or under the supervision of an individual authorized by and licensed in accordance with state statutes to engage in the healing arts or veterinary medicine. The requirements of this chapter are in addition to, and not in substitution for, other applicable requirements of this article.

General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-06-02. Definitions. As used in this chapter, the following definitions apply:

1. "Accessible surface" means the external surface of the enclosure or housing provided by the manufacturer.

2. "Added filtration" means any filtration which is in addition to the inherent filtration.

3. "Aluminum equivalent" means the thickness of type 1100 aluminum alloy affording the same attenuation, under specified conditions, as the material in question. (The nominal chemical composition of type 1100 aluminum alloy is ninety-nine percent minimum aluminum, twelve hundredths percent copper.)

4. "Assembler" means any person engaged in the business of assembling, replacing, or installing one or more components into an X-ray system or subsystem.

5. "Attenuation block" means a block or stack, having dimensions twenty centimeters by twenty centimeters by three and eight-tenths centimeters, of type 1100 aluminum alloy or other materials having equivalent attenuation.

6. "Automatic exposure control" means a device which automatically controls one or more technique factors in order to obtain at a preselected location or locations a required quantity of radiation (See also "phototimer").

7. "Barrier" (See "protective barrier").

8. "Beam axis" means a line from the source through the centers of the X-ray fields.

9. "Beam-limiting device" means a device which provides a means to restrict the dimensions of the X-ray field.

10. "Beam monitoring system" means a system designed to detect and measure the radiation present in the useful beam.

11. "Cephalometric device" means a device intended for the radiographic visualization and measurement of the dimensions of the human head.

12. "Certified components" means components of X-ray systems which are subject to regulations promulgated under the Radiation Control for Health and Safety Act of 1968 [Pub. L. 90-602].

13. "Certified system" means any X-ray system which has one or more certified component or components.

14. "Changeable filters" means any filter, exclusive of inherent filtration, which can be removed from the useful beam through any electronic, mechanical, or physical process.

15. "Coefficient of variation" or "C" means the ratio of the standard deviation to the mean value of a population of observations. It is estimated using the following equation:

$$C = \frac{s}{\bar{X}} = \frac{1}{\bar{X}} \left[\sum_{i=1}^{n} \frac{(X_i - \bar{X})^2}{n-1} \right]^{1/2}$$

where:

s = **Estimated standard deviation of the population.**

$\bar{X}$ = **Mean value of observations in sample.**

X_i = **i^{th} observation in sample.**

n = **Number of observations in sample.**

16. "Contact therapy system" means an X-ray system used for therapy with the X-ray tube port placed in contact with or within five centimeters of the surface being treated.

17. "Control panel" means that part of the X-ray control upon which are mounted the switches, knobs, pushbuttons, and other hardware necessary for manually setting the technique factors.

18. "Cooling curve" means the graphical relationship between heat units stored and cooling time.

19. "Dead-man switch" means a switch so constructed that a circuit closing contact can be maintained only by continuous pressure on the switch by the operator.

20. "Detector" means radiation detector.

21. "Diagnostic source assembly" means the tube housing assembly with a beam-limiting device attached.

22. "Diagnostic X-ray system" means an X-ray system designed for irradiation of any part of the human body for the purpose of diagnosis or visualization.

23. "Direct scattered radiation" means that scattered radiation which has been deviated in direction only by materials irradiated by the useful beam (see "scattered radiation").

24. "Entrance exposure rate" means the roentgens per unit time at the point where the center of the useful beam enters the patient.

25. "Equipment" means X-ray equipment.

26. "Exposure" means the quotient of dQ by dm where dQ is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons 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.)

    When the word exposure is used in this chapter to mean one or more irradiations of a person for a healing arts purpose, or in a more general sense, it will not be underlined.

27. "Field emission equipment" means equipment which uses an X-ray tube in which electron emission from the cathode is due solely to the action of an electric field.

28. "Filter" means material placed in the useful beam to absorb preferentially selected radiations.

29. "Fluoroscopic imaging assembly" means a subsystem in which X-ray photons produce a fluoroscopic image. It includes the image receptor or receptors such as the image intensifier and spot-film device, electrical interlocks, if any, and structural material providing linkage between the image receptor and diagnostic source assembly.

30. "Full beam detector" means a radiation detector of such size that the total cross section of the maximum size useful beam is intercepted.

31. "General purpose radiographic X-ray system" means any radiographic X-ray system which, by design, is not limited to radiographic examination of specific anatomical regions.

32. "Gonad shield" means a protective barrier for the testes or ovaries.

33. "Half-value layer" 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 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.

34. "Healing arts screening" means the testing of human beings using X-ray machines for the detection or evaluation of health indications when such tests are not specifically and individually ordered by a licensed practitioner of the healing arts legally authorized to prescribe such X-ray tests for the purpose of diagnosis or treatment.

35. "Heat unit" means a unit of energy equal to the product of the peak kilovoltage, milliamperes, and seconds, i.e., kVp x mA x seconds.

36. "HVL" means half-value layer.

37. "Image intensifier" means a device, installed in its housing, which instantaneously converts an X-ray pattern into a corresponding light image of higher energy density.

38. "Image receptor" means any device, such as a fluorescent screen or radiographic film, which transforms incident X-ray photons either into a visible image or into another form which can be made into a visible image by further transformations.

39. "Image receptor support" means, for mammographic systems, that part of the system designed to support the image receptor in a horizontal plane during a mammographic examination.

40. "Inherent filtration" means the filtration of the useful beam provided by the permanently installed components of the tube housing assembly.

41. "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 occurr or continue to occur.

42. "Irradiation" means the exposure of matter to ionizing radiation.

43. "Kilovolts peak" means peak tube potential.

44. "kV" means kilovolts.

45. "kVp" means peak tube potential.

46. "kWs" means kilowatt second. It is equivalent to 10^3 kV•mA•s,

$$(A)\,kWs = (X)kV \times (Y)mA \times (Z)s \times \frac{kWs}{10^3 kV \times mS \times s} = \frac{XYZ\ kWs}{10^3}$$

47. "Lead equivalent" means the thickness of lead affording the same attenuation, under specified conditions, as the material in question.

48. "Leakage radiation" means radiation emanating from the diagnostic or therapeutic source assembly except for:

    a. The useful beam.

    b. Radiation produced when the exposure switch or timer is not activated.

49. "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 peak tube potential and 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 millicoulombs, i.e., ten milliampere seconds, or the minimum obtainable from the unit, whichever is larger.

    b. For field emission equipment rated for pulsed operation, the maximum-rated peak tube potential and 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 peak tube potential and the maximum-rated continuous tube current for the maximum-rated peak tube potential.

50. "Light field" means that area of the intersection of the light beam from the beam-limiting device and one of the set of planes parallel to and including the plane of the image receptor, whose perimeter is the locus of points at which the illumination is one-fourth of the maximum in the intersection.

51. "Line-voltage regulation" means the difference between the no-load and the loadline potentials expressed as a percent of the loadline potential. It is calculated using the following equation:

Percent line-voltage regulation = 100 $(V_n-V_l)/V_l$

where:

V_n = No-load line potential and

V_l = Load line potential

52. "mA" means milliampere.

53. "mAs" means milliampere second.

54. "Maximum line current" means the root-mean-square current in the supply line of an X-ray machine operating at its maximum rating.

55. "Mobile equipment" (See "X-ray equipment").

56. "Peak tube potential" means the maximum value of the potential difference across the X-ray tube during an exposure.

57. "Phototimer" means a method for controlling radiation exposures to image receptors by the amount of radiation which reaches a radiation monitoring device. The radiation monitoring device is part of an electronic circuit which controls the duration of time the tube is activated (See "automatic exposure control").

58. "PID" means position indicating device.

59. "Position indicating device" means a device on dental X-ray equipment used to indicate the beam position and to establish a definite source-surface (skin) distance. It may or may not incorporate or serve as a beam-limiting device.

60. "Primary protective barrier" means protective barrier.

61. "Protective apron" means an apron made of radiation absorbing materials used to reduce radiation exposure.

62. "Protective barrier" means a barrier of radiation absorbing material or materials used to reduce radiation exposure. The types of protective barriers are as follows:

    a. "Primary protective barrier" means the material, excluding filters, placed in the useful beam, for protection purposes, to reduce the radiation exposure.

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

63. "Protective glove" means a glove made of radiation absorbing materials used to reduce radiation exposure.

64. "Qualified expert" means an individual who has demonstrated to the satisfaction of the department that such individual possesses the knowledge and training to measure ionizing radiation, to evaluate safety techniques, and to advise regarding radiation protection needs.

65. "Radiation detector" means a device which in the presence of radiation provides by either direct or indirect means, a signal or other indication suitable for use in measuring one or more quantities of incident radiation.

66. "Radiation therapy simulation system" means a fluoroscopic X-ray system intended for localizing the volume to be exposed during radiation therapy and confirming the position and size of the therapeutic irradiation field.

67. "Radiograph" means an image receptor on which the image is created directly or indirectly by an X-ray pattern and results in a permanent record.

68. "Radiographic imaging system" means any system whereby a permanent or semipermanent image is recorded on an image receptor by the action of ionizing radiation.

69. "Rating" means the operating limits as specified by the component manufacturer.

70. "Recording" means producing a permanent form of an image resulting from X-ray photons, e.g., film, video tape.

71. "Registrant" means any person who owns or possesses and administratively controls an X-ray system which is used to deliberately expose humans or animals to the useful beam of the system and is required by chapters 33-10-01 and 33-10-02 to register with this department.

72. "Response time" means the time required for an instrument system to reach ninety percent of its final reading when the radiation-sensitive volume of the instrument system is exposed to a step change in radiation flux from zero sufficient to provide a steady-state midscale reading.

73. "Scattered radiation" means radiation that, during passage through matter, has been deviated in direction (See "direct scattered radiation").

74. "Secondary protective barrier" means protective barrier.

75. "Shutter" means a device attached to the tube housing assembly which can totally intercept the useful beam and which has a

lead equivalency not less than that of the tube housing assembly.

76. "SID" means source-image receptor distance.

77. "Source" means the focal spot of the X-ray tube.

78. "Source-image receptor distance" means the distance from the source to the center of the input surface of the image receptor.

79. "Spot check" means an abbreviated calibration procedure which is performed to assure that a previous calibration continues to be valid.

80. "Spot film" means a radiograph which is made during a fluoroscopic examination to permanently record conditions which exist during that fluoroscopic procedure.

81. "Spot-film device" means a device intended to transport or position a radiographic image receptor between the X-ray source and fluoroscopic image receptor. It includes a device intended to hold a cassette over the input end of an image intensifier for the purpose of making a radiograph.

82. "Stationary equipment" means X-ray equipment.

83. "Stray radiation" means the sum of leakage and scattered radiation.

84. "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.

85. "Transmission detector" means a radiation detector through which the useful beam or part of the useful beam passes.

86. "Treatment volume" means the region, in the patient, to which a specified dose is intended to be delivered.

87. "Tube" means an X-ray tube, unless otherwise specified.

88. "Tube housing assembly" means the tube housing with tube installed. It includes high-voltage and/or filament

transformers and other appropriate elements when such are contained within the tube housing.

89. "Tube rating chart" means the set of curves which specify the rated limits of operation of the tube in terms of the technique factors.

90. "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 timer is activated.

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 source-image receptor distance.

92. "Visible area" means that portion of the input surface of the image receptor over which incident X-ray photons are producing a visible image.

93. "Wedge filter" means an added filter effecting continuous progressive attenuation on all or part of the useful beam.

94. "X-ray control" means a device which controls input power to the X-ray high-voltage generator or the X-ray tube. It includes equipment such as timers, phototimers, automatic brightness stabilizers, and similar devices, which control the technique factors of an X-ray exposure.

95. "X-ray equipment" means an X-ray system, subsystem, or component thereof. Types of X-ray equipment are as follows:

    a. "Mobile X-ray equipment" means X-ray equipment mounted on a permanent base with wheels or casters for moving while completely assembled.

    b. "Portable X-ray equipment" means X-ray equipment designed to be hand-carried.

    c. "Stationary X-ray equipment" means X-ray equipment which is installed in a fixed location.

96. "X-ray field" means that area of the intersection of the useful beam and any one of the set of planes parallel to and including the plane of the image receptor, whose perimeter is the locus of points at which the exposure rate is one-fourth of the maximum in the intersection.

97. "X-ray high-voltage generator" means a device which transforms electrical energy from the potential supplied by the X-ray control to the tube operating potential. The device may also include means for transforming alternating current to direct current, filament transformers for the X-ray tube, high-

voltage switches, electrical protective devices, and other appropriate elements.

98. "X-ray system" means an assemblage of components for the controlled production of X-rays. It includes minimally an X-ray high-voltage generator, and X-ray control, a tube housing assembly, a beam-limiting device, and the necessary supporting structures. Additional components which function with the system are considered integral parts of the system.

99. "X-ray subsystem" means any combination of two or more components of an X-ray system.

100. "X-ray tube" means any electron tube which is designed to be used primarily for the production of X-rays.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-06-03. General requirements.

1. Administrative controls.

   a. Registrant. The registrant shall be responsible for directing the operation of the X-ray systems which have been registered with the department. The registrant or the registrant's agent shall assure that the following provisions are met in the operation of the X-ray system.

      (1) An X-ray system which does not meet the provisions of this article shall not be operated for diagnostic or therapeutic purposes, if so directed by the department.

      (2) Individuals who will be operating the X-ray systems shall be adequately instructed in the safe operating procedures and be competent in the safe use of the equipment.

      (3) A chart shall be provided in the vicinity of the diagnostic X-ray system's control panel, which specifies for all examinations performed with that system the following information:

         (a) Patient's anatomical size versus technique factors to be utilized.

         (b) Type and size of the film or film-screen combination to be used.

(c) Type and focal distance of the grid to be used, if any.

(d) Source to image receptor distance to be used.

(e) Type and location of placement of gonad shielding to be used.

(4) Written safety procedures and rules shall be provided to each individual operating X-ray equipment, including any restrictions of the operating technique required for the safe operation of the particular X-ray system. The operator shall be able to demonstrate familarity with these rules.

(5) Except for patients who cannot be moved out of the room, only the staff and ancillary personnel required for the medical procedure or training shall be in the room during the radiographic exposure. Other than the patient being examined:

(a) All individuals shall be positioned such that no part of the body will be struck by the useful beam unless protected by five-tenths millimeter lead equivalent.

(b) Staff and ancillary personnel shall be protected from the direct scatter radiation by protective aprons or whole body protective barriers of not less than twenty-five hundredths millimeter lead equivalent.

(c) Patients who cannot be removed from the room shall be protected from the direct scatter radiation by whole body protective barriers of twenty-five hundredths millimeter lead equivalent or shall be so positioned that the nearest portion of the body is at least two meters from both the tube head and the nearest edge of the image receptor.

(6) Gonad shielding of not less than twenty-five hundredths millimeter lead equivalent shall be used for patients who have not passed the reproductive age during radiographic procedures in which the gonads are in the useful beam, except for cases in which this would interfere with the diagnostic procedure.

(7) Individuals shall not be exposed to the useful beam except for healing arts purposes and such exposure has been authorized by a licensed practitioner of the healing arts. This provision specifically prohibits deliberate exposure for the following purpose:

(a) Exposure of an individual for training, demonstration or other non-healing-arts purposes; and

(b) Exposure of an individual for the purpose of healing arts screening except as authorized by paragraph 1.

(8) When a patient or film must be provided with auxiliary support during a radiation exposure:

(a) Mechanical holding devices shall be used when the technique permits. The safety rules, required by this section shall list individual projections where holding devices cannot be utilized.

(b) Written safety procedures, as required by paragraph 4, shall indicate the requirements for selecting a holder and the procedure the holder shall follow.

(c) The human holder shall be protected as required by paragraph 5.

(d) No individual shall be used routinely to hold film or patients.

(e) Such holding shall be permitted only in very unusual and rare situations.

(f) In those cases where the patient must hold the film, except during intraoral examinations, any portion of the body other than the area of clinical interest struck by the useful beam shall be protected by not less than five-tenths millimeter lead equivalent material.

(g) A record shall be made of the examination and shall include the name of the human holder, date of the examination, number of exposures, and technique factors utilized for the exposure.

(9) Procedures and auxiliary equipment designed to minimize patient and personnel exposure commensurate with the needed diagnostic information shall be utilized. This is interpreted to include but not limited to:

(a) The speed of film or screen and film combinations shall be the fastest speed consistent with the diagnostic objective of the examinations.

(b) The radiation exposure to the patient shall be the minimum exposure required to produce images of good diagnostic quality.

(c) Portable or mobile equipment shall be used only for examinations where it is impractical to transfer the patients to a stationary radiographic installation.

(d) X-ray systems subject to section 33-10-06-06 shall not be utilized in procedures where the source to patient distance is less than thirty centimeters.

(10) All individuals who are associated with the operation of an X-ray system are subject to the requirements of subsections 1 and 2 of section 33-10-04-02. In addition:

(a) When protective clothing or devices are worn on portions of the body and a monitoring device is required, at least one such monitoring device shall be utilized as follows:

[1] When an apron is worn, the monitoring device shall be worn at the collar outside of the apron.

[2] The dose to the whole body based on the maximum dose attributed to the most critical organ shall be recorded in the reports required by subsection 1 of section 33-10-04-05. If more than one device is used and a record is made of the data, each dose shall be identified with the area where the device was worn on the body.

(b) Exposure of a personnel monitoring device to deceptively indicate a dose delivered to an individual is prohibited.

(11) Healing arts screening. Any person proposing to conduct a healing arts screening program shall not initiate such a program without prior approval of the department. When requesting such approval, that person shall submit the information outlined in Appendix C of this chapter. If any information submitted to the department becomes invalid or outdated, the department shall be immediately notified.

b. Information and maintenance record and associated information. The registrant shall maintain the following

information for each X-ray system for inspection by the department:

(1) Maximum rating of technique factors.

(2) Model and serial numbers of all certifiable components.

(3) Aluminum equivalent filteration of the useful beam, including any routine variation.

(4) Tube rating charts and cooling curves.

(5) Records of surveys, calibrations, maintenance, and modifications performed on the X-ray system after the effective date of section 33-10-06-03 with the names of persons who performed such services.

(6) A scale drawing of the room in which a stationary X-ray system is located with such drawing indicating the use of areas adjacent to the room and an estimation of the extent of occupancy by an individual in such areas. In addition, the drawing shall include:

(a) The results of a survey for radiation levels present at the operator's position and at pertinent points outside the room at specified test conditions; or

(b) The type and thickness of materials, or lead equivalency, or each protective barrier.

(7) A copy of all correspondence with this department regarding that X-ray system.

c. X-ray log. Each facility shall maintain a X-ray log containing the examinations and the dates those examinations were performed. The log shall indicate when the techniques or procedures vary from those specified in the technique chart required in paragraph 3 of subdivision a of subsection 1. The log shall contain the information required by paragraphs 7 and 9 of subdivision a of subsection 1.

2. Plan review.

a. Prior to construction, the floor plans and equipment arrangement or all new installations, or modifications of existing installations, utilizing X-rays for diagnostic or therapeutic purposes shall be submitted to the agency for review and approval. The required information is denoted in Appendices A and B of this chapter.

b. The department may require the applicant to utilize the services of a qualified expert to determine the shielding requirements prior to the plan review and approval.

c. The approval of such plans shall not preclude the requirement of additional modifications should a subsequent analysis of operating conditions indicate the possibility of an individual receiving a dose in excess of the limits prescribed in subsections 1, 4, and 5 of section 33-10-04-02 of these regulations.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-06-04. General requirements for all diagnostic X-ray systems. In addition to other requirements of this chapter, all diagnostic X-ray systems shall meet the following requirements:

1. Warning label. The control panel containing the main power switch shall bear the warning statement, legible and accessible to view: "WARNING: This X-ray unit may be dangerous to patient and operator unless safe exposure factors and operating instructions are observed."

2. Battery charge indicator. On battery-powered X-ray generators, visual means shall be provided on the control panel to indicate whether the battery is in a state of charge adequate for proper operation.

3. Leakage radiation from the diagnostic source assembly. The leakage radiation from the diagnostic source assembly measured at a distance of one meter in any direction from the source shall not exceed one hundred milliroentgens in one hour when the X-ray tube is operated at its leakage technique factors. Compliance shall be determined by measurements averaged over an area of one hundred square centimeters with no linear dimension greater than twenty centimeters.

4. Radiation from components other than the diagnostic source assembly. The radiation emitted by a component other than the diagnostic source assembly shall not exceed two milliroentgens in one hour at five centimeters from any accessible surface of the component when it is operated in an assembled X-ray system under any conditions for which it was designed. Compliance shall be determined by measurements averaged over an area of one hundred square centimeters with no linear dimension greater than twenty centimeters.

5. Beam quality.

   a. Half-value layer.

(1) The half-value layer (HVL) of the useful beam for a given X-ray tube potential shall not be less than the values shown in Table I. If it is necessary to determine such half-value layer at an X-ray tube potential which is not listed in Table I, linear interpolation or extrapolation may be made.

TABLE I

Design Operating Range (Kilovolts Peak)	Measured Potential (Kilovolts peak)	Half-value Layer (Millimeters of aluminum)
Below 50	50	0.3
	40	0.4
	49	0.5
50 to 70	50	1.2
	60	1.3
	70	1.5
Above 70	71	2.1
	80	2.3
	90	2.5
	100	2.7
	110	3.0
	120	3.2
	130	3.5
	140	3.8
	150	4.1

(2) The above HVL criteria will be considered to have been met if it can be demonstrated that the aluminum equivalent of the total filtration in the primary beam is not less than that shown in Table II.

TABLE II

Filtration Required vs. Operating Voltage

Operating Voltage (kVp)	Total Filtration (inherent plus added) (millimeters aluminum equivalent)
Below 50	0.5 millimeters
50 - 70	1.5 millimeters
Above 70	2.5 millimeters

(3) Beryllium window tubes shall have a minimum of five-tenths millimeter aluminum equivalent filtration permanently installed in the useful beam.

(4) For capacitor energy storage equipment, compliance with the requirements of this subsection shall be determined with the maximum quantity of charge per exposure.

(5) The required minimal aluminum equivalent filtration shall include the filtration contributed by all materials which are always present between the source and the patient.

b. Filtration controls. For X-ray systems which have variable kVp and variable filtration for the useful beam, a device shall link the kVp selector with the filters and shall prevent an exposure unless the minimum amount of filtration required by paragraphs 1 or 2 of subdivision a is in the useful beam for the given kVp which has been selected.

6. Multiple tubes. Where two or more radiographic tubes are controlled by one exposure switch, the tube or tubes which have been selected shall be clearly indicated prior to initiation of the exposure. This indication shall be both on the X-ray control panel and at or near the tube housing assembly which has been selected.

7. Mechanical support of tube head. The tube housing assembly supports shall be adjusted such that the tube housing assembly will remain stable during an exposure unless tube housing movement is a designed function of the X-ray system.

8. Technique indicators.

a. The technique factors to be used during an exposure shall be indicated before the exposure begins, except when automatic exposure controls are used, in which case the technique factors which are set prior to the exposure shall be indicated.

b. The requirements of subdivision a may be met by permanent markings on equipment having fixed technique factors. Indication of technique factors shall be visible from the operators position except in the case of spot films made by the fluoroscopist.

9. Focal spot indication. [Reserved]

10. Structural shielding requirements (See Appendix C).

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-06-05. Fluoroscopic X-ray systems. All fluoroscopic X-ray systems shall meet the following requirements:

1. Limitation of useful beam.

a. Primary barrier.

(1) The fluoroscopic imaging assembly shall be provided with a primary protective barrier which intercepts the entire cross section of the useful beam at any source-image receptor distance.

(2) The X-ray tube used for fluoroscopy shall not produce X-rays unless the barrier is in position to intercept the entire useful beam.

b. X-ray field.

(1) The X-ray field produced by non-image-intensified fluoroscopic equipment shall not extend beyond the entire visible area of the image receptor. This requirement applies to field size for both fluoroscopic procedures and spot filming procedures. In addition:

(a) Means shall be provided for stepless adjustment of the field size;

(b) The minimum field size at the greatest source-image receptor distance shall be equal to or less than five centimeters by five centimeters;

(c) For equipment manufactured after February 25, 1978, when the angle between the image receptor and the beam axis of the X-ray beam is variable, means shall be provided to indicate when the axis of the X-ray beam is perpendicular to the plane of the image receptor; and

(d) Compliance with this paragraph shall be determined with the beam axis indicated to be perpendicular to the plane of the image receptor.

(2) For image-intensified fluoroscopic equipment, neither the length nor the width of the X-ray field in the plane of the image receptor shall exceed that of the visible area of the image receptor by more than three percent of the source-image receptor distance. The sum of the excess length and the excess width shall be no greater than four percent of the source-image receptor distance. In addition:

(a) Means shall be provided to permit further limitation of the field;

(b) The minimum field size at the greatest source-image receptor distance shall be equal to or less than five centimeters by five centimeters;

(c) For equipment manufactured after February 25, 1978, when the angle between the image receptor and beam axis is variable, means shall be provided to indicate when the axis of the X-ray beam is perpendicular to the plane of the image receptor; and

(d) Compliance shall be determined with the beam axis indicated to be perpendicular to the plane of the image receptor. For rectangular X-ray fields used with circular image reception, the error in alignment shall be determined along the length and width dimensions of the X-ray field which pass through the center of the visible area of the image receptor.

(3) Spot-film devices which are certified components shall meet the following additional requirements:

(a) Means shall be provided between the source and the patient for adjustment of the X-ray field size in the plant of the film to the size of that portion of the film which has been selected on the spot film selector. Such adjustment

shall be automatically accomplished except when the X-ray field size in the plane of the film is smaller than that of the selected portion of the film;

(b) It shall be possible to adjust the X-ray field size in the plane of the film to a size smaller than the selected portion of the film. The minimum field size at the greatest source-image receptor distance shall be equal to, or less than, five centimeters by five centimeters;

(c) The center of the X-ray field in the plane of the film shall be aligned with the center of the selected portion of the film to within two percent of the source-image receptor distance; and

(d) On spot-film devices manufactured after February 25, 1978, if the angle between the plane of the image receptor and beam axis is variable, means shall be provided to indicate when the axis of the X-ray beam is perpendicular to the plane of the image receptor, and compliance shall be determined with the beam axis indicated to be perpendicular to the plane of the image receptor.

2. Activation of the fluoroscopic tube. X-ray production in the fluoroscopic mode shall be controlled by a device which requires continuous pressure by the fluoroscopist for the entire time of any exposure. When recording serial fluoroscopic images, the fluoroscopist shall be able to terminate the X-ray exposure or exposures at any time, but means may be provided to permit completion of any single exposure of the series in process.

3. Exposure rate limits.

a. Entrance exposure rate allowable limits.

(1) The exposure measured at the point where the center of the useful beam enters the patient shall not exceed ten roentgens per minute, except during recording of fluoroscopic images or when provided with optional high level control.

(2) When provided with optional high level control, the equipment shall not be operable at any combination of tube potential and current which will result in an exposure rate in excess of five roentgens per minute at the point where the center of the useful beam

enters the patient unless the high level control is activated.

(a) Special means of activation of high level controls shall be required. The high level control shall only be operable when continuous manual activation is provided by the operator.

(b) A continuous signal audible to the fluoroscopist shall indicate that the high level control is being employed.

(3) In addition to the other requirements of this section, certified equipment which does not incorporate an automatic exposure control shall not be operable at any combination of tube potential and current which will result in any exposure rate in excess of five roentgens per minute at the point where the center of beam enters the patient except during recording of fluoroscopic images or when provided with an optional high level control.

(4) Compliance with the requirements of this subsection shall be determined as follows:

(a) Movable grids and compression devices shall be removed from the useful beam during the measurement.

(b) If the source is below the table, the exposure rate shall be measured one centimeter above the tabletop or cradle.

(c) If the source is above the table, the exposure rate shall be measured at thirty centimeters above the tabletop with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement.

(d) In a C-arm type of fluoroscope, the exposure rate shall be measured thirty centimeters from the input surface of the fluoroscopic imaging assembly.

(5) Periodic measurement of entrance exposure rate shall be performed as follows:

(a) Such measurements shall be made annually or after any maintenance of the system which might affect the exposure rate.

(b) Results of these measurements shall be posted where any fluoroscopist may have ready access to

such results while using the fluoroscope and in the record required in paragraph 5 of subdivision b of subsection 1 of section 33-10-06-03. Results of the measurements shall include the roentgen per minute, as well as the technique factors used to determine such results. The name of the person performing the measurements and the date the measurements were performed shall be included in the results.

(c) Use of monitoring devices, e.g., commercially available film badges, thermoluminescent dosimeters, or low energy dosimeters, may be used to perform the measurements required by subparagraph a provided the measurements are made as described in subparagraph d.

(d) Conditions of periodic measurements of entrance exposure rate are as follows:

[1] The measurement shall be made under the conditions that satisfy the requirements of paragraph 4.

[2] The kilovolts peak shall be the kilovolts typical of clinical use of the X-ray system.

[3] The X-ray systems that incorporates automatic exposure control shall have sufficient material placed in the useful beam to produce a milliamperage typical of the use of the X-ray system.

[4] X-ray systems that do not incorporate an automatic exposure control shall utilize a milliamperage typical of clinical use of the X-ray system. Materials should be placed in the useful beam when conducting these periodic measurements to protect the imaging system.

4. Barrier transmitted radiation rate limits.

a. The exposure rate due to transmission through the primary protective barrier with the attenuation block in the useful beam, combined with radiation from the image intensifier, if provided, shall not exceed two milliroentgens per hour at ten centimeters from any accessible surface of the fluoroscopic imaging assembly beyond the plane of the image receptor for each roentgen per minute of entrance exposure rate.

b. Measuring compliance of barrier transmission.

(1) The exposure rate due to transmission through the primary protective barrier combined with radiation from the image intensifier shall be determined by measurements averaged over an area of one hundred square centimeters with no linear dimension greater than twenty centimeters.

(2) If the source is below the tabletop, the measurement shall be made with the input surface of the fluoroscopic imaging assembly positioned thirty centimeters above the tabletop.

(3) If the source is above the tabletop and the source-image receptor distance is variable, the measurement shall be made with the end of the beam-limiting device or spacer as close to the tabletop as it can be placed, provided that it shall not be closer than thirty centimeters.

(4) Movable grids and compression devices shall be removed from the useful beam during the measurement.

(5) The attenuation block shall be positioned in the useful beam ten centimeters from the point of measurement of entrance exposure rate and between this point and the input surface of the fluoroscopic imaging assembly.

5. Indication of potential and current. During fluoroscopy and cinefluorography, the kilovolt and the milliampere shall be continuously indicated.

6. Source-skin distance. The source to skin distance shall not be less than:

a. Thirty-eight centimeters on stationary fluoroscopes installed after the effective date of this regulation,

b. Thirty-five centimeters on stationary fluoroscopes which are in operation prior to the effective date of these regulations,

c. Thirty centimeters on all mobile fluoroscopes, and

d. Twenty centimeters for image intensified fluoroscopes used for specific surgical application. The users operating manual must provide precautionary measures to be adhered to during the use of this device.

7. Fluoroscopic timer.

a. Means shall be provided to preset the cumulative on-time of the fluoroscopic tube. The maximum cumulative time of the timing device shall not exceed five minutes without resetting.

b. A signal audible to the fluoroscopist shall indicate the completion of any preset cumulative on-time. Such signal shall continue to sound while X-rays are produced until the timing device is reset.

8. Mobile fluoroscopes. In addition to the other requirements of this section, mobile fluoroscopes shall provide intensified imaging.

9. Control of scattered radiation.

a. Fluoroscopic table designs when combined with procedures utilized shall be such that no unprotected part of any staff or ancillary individual's body shall be exposed to unattenuated scattered radiation which originates from under the table. The attenuation required shall be not less than twenty-five hundredths millimeter lead equivalent.

b. Equipment configuration when combined with procedures shall be such that no portion of any staff or ancillary individual's body, except the extremities, shall be exposed to the unattenuated scattered radiation emanating from above the tabletop unless that individual:

(1) Is at least one hundred twenty centimeters from the center of the useful beam; or

(2) The radiation has passed through not less than twenty-five hundredths millimeter lead equivalent material, e.g., drapes, bucky-slot cover-sliding or folding panel, or self-supporting curtains, in addition to any lead equivalency provided by the protective apron referred to in paragraph 5 of subdivision a of subsection 1 of section 33-10-06-03.

c. Exceptions to subdivision b may be made in some special procedures where a sterile field will not permit the use of the normal protective barriers. Where the use of prefitted sterilized covers for the barriers is practical, the department shall not permit such exception.

10. Radiation therapy simulation system. Radiation therapy simulation systems shall be exempt from all the requirements of subsections 1, 4, and 7 provided that:

a. Such systems are designed and used in such a manner that no individual other than the patient is in the X-ray room

during periods of time when the system is producing X-rays; and

b. Such systems as do not meet the requirements of subsection 7 are provided with a means of indicating the cumulative time that an individual patient has been exposed to X-rays. Procedures shall require in such cases that the timer be reset between examinations.

11. Structural shielding requirements (See Appendix C).

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-06-06. Radiographic systems other than fluoroscopic, dental intraoral, or veterinarian systems.

1. Beam limitations. The useful beam shall be limited to the area of clinical interest.

   a. General purpose stationary and mobile X-ray systems.

      (1) There shall be provided a means for stepless adjustment of the size of the X-ray field.

      (2) Means shall be provided for visually defining the perimeter of the X-ray field. The total misalignment of the edges of the visually defined field with the respective edges of the X-ray field along either the length or width of the visually defined field shall not exceed two percent of the distance from the source to the center of the visually defined field when the surface upon which it appears is perpendicular to the axis of the X-ray beam.

      (3) The department may grant an exemption on noncertified X-ray systems to paragraphs 1 and 2 and provided the registrant makes a written application for such exemption and in that application:

         (a) Demonstrates it is impractical to comply with paragraph 1 and 2; and

         (b) The purpose of paragraphs 1 and 2 will be met by other means.

   b. Additional requirements for stationary general purpose X-ray systems. In addition to the requirements of subdivision a of this subsection, all stationary X-ray systems shall meet the following requirements:

(1) Means shall be provided to indicate when the axis of the X-ray beam is perpendicular to the plane of the image receptor, to align the center of the X-ray field with respect to the center of the image receptor to within two percent of the source-image receptor distance, and to indicate the source-image receptor distance to within two percent.

(2) The beam-limiting device shall numerically indicate the field size in the plane of the image receptor to which it is adjusted.

(3) Indication of field size dimensions and source-image receptor distance's shall be specified in inches or centimeters, and shall be such that aperture adjustments result in X-ray field dimensions in the plane of the image receptor which correspond to those indicated by the beam-limiting device to within two percent of the source-image receptor distance when the beam axis is indicated to be perpendicular to the plane of the image receptor.

c. X-ray systems designed for one image receptor size. Radiographic equipment designed for only one image receptor size at the fixed source-image receptor distance shall be provided with means to limit the field at the plane of the image receptor to dimensions no greater than those of the image receptor, and to align the center of the X-ray field with the center of the image receptor to within two percent of the source-image receptor distance, or shall be provided with means to both size and align the X-ray field such that the X-ray field at the plane of the image receptor does not extend beyond any edge of the image receptor.

d. Systems designed for or provided with special attachments for mammography. Radiographic systems designed only for mammography and general purpose radiographic systems, when special attachments for mammography are in service, shall be provided with means to limit the useful beam such that the X-ray field at the plane of the image receptor does not extend the edge of the image receptor designed to be adjacent to the chest wall where the X-ray field may not extend beyond this edge by more than two percent of the source-image receptor distance. This requirement can be met with a system which performs as prescribed in paragraph 3 of subdivision e. When the beam-limiting device and image receptor support device are designed to be used to immobilize the breast during a mammographic procedure and the source-image receptor distance may vary, the source-image receptor distance indication specified in subparagraphs a and b of paragraph 3 of subdivision e shall be the maximum source-image receptor distance for

which beam-limiting device or aperture is designed. In addition, each image receptor support intended for installation on a system designed only for mammography shall have clear and permanent markings to indicate the maximum image receptor size for which it is designed.

e. Special purpose X-ray systems.

(1) Means shall be provided to limit the X-ray field in the plane of the image receptor so that such field does not exceed each dimension of the image receptor by more than two percent of the source-image receptor distance when the axis of the X-ray beam is perpendicular to the plane of the image receptor.

(2) Means shall be provided to align the center of the X-ray field with the center of the image receptor to within two percent of the source-image receptor distance, or means shall be provided to both size and align the X-ray field such that the X-ray field at the plane of the image receptor does not extend beyond any edge of the image receptor.

(3) Paragraphs 1 and 2 may be met with a system that meets the requirements for a general purpose X-ray system as specified in this subsection, or, when alignment means are also provided, may be met with either:

(a) An assortment of removable, fixed-aperture, beam-limiting devices sufficient to meet the requirement for each combination of image receptor size and source-image receptor distance for which the unit is designed with each such device having clear and permanent markings to indicate the image receptor size and source-image receptor distance for which it is designed; or

(b) A beam-limiting device having multiple fixed apertures sufficient to meet the requirement for each combination of image receptor size and source-image receptor distance for which the unit is designed. Permanent, clearly legible markings shall indicate the image receptor size and source-image receptor distance for which each aperture is designed and shall indicate which aperture is in position for use.

2. Radiation exposure control devices.

a. Timers. Means shall be provided to terminate the exposure at the preset time interval, preset product of current and

time, a preset number of pulses, or a preset radiation exposure to the image receptor. In addition, it shall not be possible to make an exposure when the timer is set to a "zero" or "off" position if either position is provided.

b. X-ray control (exposure switch).

(1) A control which shall be the equivalent of a dead-man switch shall be incorporated into each X-ray system such that an exposure can be terminated at any time except for:

(a) Exposure of one-half second or less; or

(b) During serial radiography when means shall be provided to permit completion of any single exposure of the series in process.

(2) Each X-ray control shall be located in such a way as to meet the following requirements:

(a) Stationary X-ray systems shall be required to have the X-ray control permanently mounted in a protected area so that the operator is required to remain in that protected area during the entire exposure (See Appendix B).

(b) Mobile and portable X-ray systems which are:

[1] Used for greater than one week in one location (one room or suite) shall meet the requirements of subparagraph a.

[2] Used for greater than one hour and less than one week at one location, (one room or suite) shall meet the requirement of item 1 of this subparagraph or be provided with a six and one-half foot [1.98 meter] high protective barrier which is placed at least six feet [1.83 meters] from the tube housing assembly and at least six feet [1.83 meters] from the patient.

[3] Used to make an exposure of only one patient at the use location shall meet the requirement of item 1 or 2 of this subparagraph or be provided with a method of X-ray control which will permit the operator to be at least twelve feet [3.66 meters] from the tube housing assembly during an exposure.

(c) The X-ray control shall provide visual indication observable at or from the operator's protected position whenever X-rays are produced. In addition, a signal audible to the operator shall indicate that the exposure has terminated.

c. Automatic exposure controls. When an automatic exposure control is provided:

(1) Indication shall be made on the control panel when this mode of operation is selected;

(2) If the X-ray tube potential is equal to or greater than fifty kilovolts peak, the minimum exposure time for field emission equipment rated for pulsed operation shall be equal to or less than a time interval equivalent to two pulses;

(3) The minimum exposure time for all equipment other than that specified in paragraph 2 shall be equal to or less than one-sixtieth second or a time interval required to deliver five milliampere seconds, whichever is greater;

(4) Either the product of the peak X-ray tube potential, current, and exposure time shall be limited to not more than sixty kilowatt seconds per exposure or the product of X-ray tube current and exposure time shall be limited to not more than six hundred milliampere seconds per exposure except when the X-ray tube potential is less than fifty kilovolts peak in which case the produce of X-ray tube current and exposure time shall be limited to not more than two hundred milliampere seconds per exposure; and

(5) A visible signal shall indicate when an exposure has been terminated at the limits required by paragraph 4, and manual resetting shall be required before further automatically timed exposures can be made.

d. Reproducibility. With a timer setting of five-tenths seconds or less, the average exposure period (T) shall be greater than or equal to five times the maximum exposure period (T_{max}) minus the minimum exposure period (T_{min}) when four tests are performed.

$$\text{i.e., } \overline{T} \geq 5(T_{max} - T_{min}).$$

3. Source-to-skin distance. All mobile or portable radiographic systems shall be provided with means to limit the source-to-skin distance to not less than thirty centimeters.

4. Exposure reproducibility. The exposure reproducibility shall meet the following requirements:

   The coefficient of variation shall not exceed ten hundredths when all technique factors are held constant. This requirement shall be deemed to have been met if, when four exposures are made at identical technique factors, that the value of the average exposure (E) is greater than or equal to five times the maximum exposure (E_{max}) minus the minimum exposure (E_{min}),

   i.e., $\bar{E} \geq 5(E_{max} - E_{min})$.

5. Radiation from capacitor energy storage equipment in standby status. Radiation emitted from the X-ray tube when the exposure switch or timer is not activated shall not exceed a rate of two milliroentgens per hour at five centimeters from any accessible surface of the diagnostic source assembly, with the beam-limiting device fully open.

6. Additional requirements applicable to certified systems only. Diagnostic X-ray systems incorporating one or more certified components shall be required to comply with the following additional requirements which relate to that certified components.

   a. Reproducibility. When the equipment is operated on an adequate power supply as specified by the manufacturer in accordance with the requirements of applicable federal standards, the estimated coefficient of variation of radiation exposures shall be no greater than five hundredths for any specific combination of selected technique factors.

   b. Linearity. When the equipment allows a choice of X-ray tube current settings and is operated on power supply as specified by the manufacturer in accordance with the requirements of applicable federal standards, for any fixed X-ray tube potential within the range of forty percent to one hundred percent of the maximum rating, the average ratios of exposure to the indicated milliampere-seconds product, i.e., mR/mAs, obtained at any two consecutive tube current settings shall not differ by more than ten hundredths times their sum,

   i.e., $|\bar{X}_1 - \bar{X}_2| \leq 0.10\ (\bar{X}_1 + \bar{X}_2)$,

where $\bar{X}_1$ and $\bar{X}_2$ are the average mR/mAs values obtained at each of two consecutive tube current settings.

c. Accuracy. Deviation of technique factors from indicated values shall not exceed the limits specified for that system by its manufacturer.

d. Beam limitation for stationary and mobile general purpose X-ray systems.

(1) There shall be provided a means of stepless adjustment of the size of the X-ray field. The minimum field size at an source-image receptor distance of one hundred centimeters shall be equal to or less than five centimeters by five centimeters.

(2) When a light localizer is used to define the X-ray field, it shall provide an average illumination of not less than one hundred sixty lux or fifteen foot-candles at one hundred centimeters or at the maximum source-image receptor distance, whichever is less. The average illumination shall be based upon measurements made in the approximate center of each quadrant of the light field.

(3) The edge of the light field at one hundred centimeters or at the maximum source-image receptor distance, whichever is less, shall have a contrast ratio, corrected for ambient lighting, of not less than four in the case of beam-limiting devices designed for use on stationary equipment, and a contrast ratio of not less than three in the case of beam-limiting devices designed for use on mobile equipment. The contrast ratio is defined as I_1/I_2 where I_1 is the illumination three millimeters from the edge of the light field toward the center of the light field is the illumination three millimeters from the edge of the light field away from the center of the field. Compliance shall be determined with a measuring instrument aperture of one millimeter in diameter.

e. Beam limitation for portable X-ray systems. Beam limitation for portable X-ray systems shall meet the beam limitation requirements of subdivision a of subsection 1 and subdivision d of this subsection.

f. Field limitation and alignment on stationary general purpose X-ray systems. The requirements of this subdivision shall apply to assembly, an X-ray control, and, for those systems so equipped, a table, all certified in accordance with 21 CFR 1020.30(c).

(1) Means shall be provided for positive beam limitation which will, at the source-image receptor distance for

which the device is designed, either cause automatic adjustment of the X-ray field in the plane of the image receptor to the image receptor size within five seconds after insertion of the image receptor or, if adjustment is accomplished automatically in a time interval greater than five seconds or is manual, will prevent production of X-rays until such adjustment is completed. For the source-image receptor distance at which the device is not intended to operate, the device shall prevent the production of X-rays.

(2) The X-ray field size in the plane of the image receptor, whether automatically or manually adjusted, shall be such that neither the length nor the width of the X-ray field differs from that of the image receptor by greater than three percent of the source-image receptor distance and that the sum of the length and width differences without regard to sign be no greater than four percent of the source-image receptor distance when the equipment indicated that the beam axis is perpendicular to the plane of the image receptor.

(3) The radiographic system shall be capable of operation, at the discretion of the operator, such that the field size at the image receptor can be adjusted to a size smaller than the image receptor. The minimum field size at a distance of one hundred centimeters shall be equal to or less than five centimeters by five centimeters. Return to positive beam limitation as specified in paragraphs 1 and 2 shall occur upon a change in image receptor.

(4) Positive beam limitation may be bypassed when radiography is conducted which does not use the cassette tray or permanently mounted vertical cassette holder, or when either the beam axis or table angulation is not either ten degrees of the horizontal or vertical during any part of the exposure, or during stereoscopic radiography. If the bypass mode is provided, return to positive beam limitation shall be automatic.

(5) A capability may be provided for overriding positive beam limitation in the event of system failure or to perform special procedures which cannot be performed in the positive mode. If so provided, a key shall be required to override the positive mode. It shall be impossible to remove the key while the positive mode is overridden.

g. Timers. Except for dental panoramic systems, termination of exposure shall cause automatic resetting of the timer to its initial setting or to "zero".

h. Transmission limit for image receptor supporting devices used for mammography. For X-ray systems manufactured after September 5, 1978, which are designed only for mammography, the transmission of the primary beams through the image receptor support provided with the system will be limited such that the exposure five centimeters from any accessible surface beyond the plane of the image receptor supporting device does not exceed one-tenth milliroentgen for each activation of the tube. Exposure shall be measured with the system operated at the minimum source-image receptor distance for which it is designed. Compliance shall be determined at the maximum rated peak tube potential for the system and at the maximum rated product of tube current and exposure time (milliampere second) for that peak tube potential. Compliance shall be

determined by measurements averaged over an area of one hundred square centimeters with no linear dimension greater than twenty centimeters.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-06-07. Intraoral dental radiographic systems. In addition to the provisions of section 33-10-06-03 and 33-10-06-04, the requirements of this section apply to X-ray equipment and associated facilities used for dental radiography. Criteria for extraoral dental radiographic systems are covered in section 33-10-06-06.

1. Source-to-skin distance. X-ray systems designed for use with an intraoral image receptor shall be provided with means to limit source-to-skin distance to not less than:

   a. Eighteen centimeters if operable above fifty kilovolts peak.

   b. Ten centimeters if not operable above fifty kilovolts peak.

2. Field limitation.

   a. Radiographic systems designed for use with an intraoral image receptor shall be provided with means to limit the X-ray beam such that:

      (1) If the minimum source-to-skin distance (SSD) is eighteen centimeters or more, the X-ray field, at the

minimum source-to-skin distance, shall be containable in a circle having a diameter of no more than seven centimeters.

(2) If the minimum source-to-skin distance is less than eighteen centimeters, the X-ray field, at the minimum source-to-skin distance, shall be containable in a circle having a diameter of no more than six centimeters.

b. An open ended shield position indicating device shall be used. The shielding shall be equivalent to the requirements of subsection 4 of section 33-10-06-04.

3. Timers. Means shall be provided to terminate the exposure at a preset time interval, preset product of current and time, a preset number of pulses, or a preset radiation exposure to the image receptor. In addition:

a. Termination of exposure shall cause automatic resetting of the timer to its initial setting or to zero.

b. It shall not be possible to make an exposure when the timer is set to a zero or off position if either position is provided.

c. Accuracy. All timers shall be accurate to within ± ten percent of the selected value.

d. Reproducibility. When four timer tests taken at identical timer settings are performed the average time period (T) shall be greater than five times the maximum period (T_{max}) less the minimum period (T_{min}). T shall be less than or equal to five seconds.

$\bar{T}$ is greater than 5 ($T_{max} - T_{min}$)

4. X-ray control (exposure switch).

a. A control which shall be the equivalent of a dead-man switch shall be incorporated into each X-ray system such that an exposure can be terminated at any time, except for exposures of one-half second or less.

b. Each X-ray control shall be located in such a way as to meet the following criteria:

(1) Stationary X-ray systems, shall have the control switch permanently mounted in a protected area, e.g., corridor outside the room, so that the operator is

required to remain in that protected area during the entire exposure.

(2) Mobile and portable X-ray systems which are:

(a) Used for greater than one week in one location (one room or suite) shall meet the requirements of paragraph 1 of this subdivision.

(b) Used for more than one hour and less than one week at one location (one room or suite) shall meet the requirements of subparagraph a of this paragraph or be provided with a six and one-half foot [1.98 meter] high protective barrier which is placed at least six feet [1.83 meters] from the tube housing assembly and at least six feet [1.83 meters] from the patient.

(c) Used to make an exposure of only one patient at the use location shall meet the requirement of items 1 and 2 of subparagraph b of paragraph 2 of subdivision b of subsection 2 of section 33-10-06-06 or be provided with a method of control which will permit the operator to be at least twelve feet [3.66 meters] from the tube head assembly during an exposure.

c. The X-ray control shall provide visual indication observable at or from the operator's protected position whenever X-rays are produced. In addition, a signal audible to the operator shall indicate that the exposure has terminated.

5. Exposure reproducibility. The exposure reproducibility shall meet the following requirements.

The coefficient of variation shall not exceed ten hundredths when all technique factors are held constant. This requirement shall be deemed to have been met if, when four exposures are made at identical technique factors, that the value of the average exposure (E) is greater than or equal to five times the maximum exposure (E_{max}) minus the minimum exposure (E_{min}),

$$\text{i.e., } \bar{E} \geq 5(E_{max} - E_{min}).$$

6. Administrative controls.

a. Patient and film holding devices shall be used when the techniques permit.

b. Neither the tube housing nor the position indicating device shall be hand-held during an exposure.

c. The X-ray system shall be operated in such a manner that the useful beam at the patient's skin does not exceed the requirements of subdivision a of subsection 2.

d. Dental fluoroscopy without image intensification shall not be used.

7. Additional requirements applicable to certified systems only. Only diagnostic X-ray systems incorporating one or more certified components shall be required to comply with the following additional requirements which relate to that certified component.

a. Reproducibility. When the equipment is operated on an adequate power supply as specified by the manufacturer, the estimated coefficient of variation of radiation exposures shall be no greater than five hundredths for any specific combination of selected technique factors.

b. Linearity. When the equipment allows a choice of X-ray tube current settings and is operated on a power supply as specified by the manufacturer in accordance with the requirements of applicable federal standards, for any fixed X-ray tube potential within the range of forty percent to one hundred percent of the maximum rating, the average ratios of exposure to the indicated milliampere-seconds product, i.e., mR/mAs, obtained at any two consecutive tube current settings shall not differ by more than ten hundredths times their sum,

$$\text{i.e., } |\bar{X}_1 - \bar{X}_2| \leq 0.10\ (\bar{X}_1 + \bar{X}_2),$$

where $\bar{X}_1$ and $\bar{X}_2$ are the average mR/mAs values obtained at each of two consecutive tube current settings.

c. Accuracy. Deviation of technique factors from indicated values shall not exceed the limits specified for that system by its manufacturer.

d. Timers. Termination of exposure shall cause automatic resetting of the timer to its initial setting or to "zero".

8. Structural shielding requirements (See Appendix C).

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-06-08. Therapeutic X-ray systems of less than one megaelectronvolt.

1. Equipment requirements.

   a. Leakage radiation. When the tube is operated at its leakage technique factors, the leakage radiation shall not exceed the value specified at the distance specified for the classification of that X-ray system.

      (1) Contact therapy systems. Leakage radiation shall not exceed one hundred milliroentgens per hour at five centimeters from the surface of the tube housing assembly.

      (2) 0-150 kilovolts peak systems. Systems which are manufactured or installed prior to the effective date of this section shall have a leakage radiation which does not exceed one roentgen in one hour at one meter from the source.

      (3) 0-150 kilovolts peak systems. Systems which are manufactured on or after the effective date of this section shall have a leakage radiation which does not exceed one hundred milliroentgens in one hour at one meter from the source.

      (4) 151 to 999 kilovolts peak systems. The leakage radiation shall not exceed one roentgen in one hour at one meter from source except systems that operate in excess of five hundred kilovolts peak may have a leakage radiation at one meter from the source equivalent to the exposure within one hour of the useful beam at one meter from the source multiplied by a factor of one thousandths.

   b. Permanent beam-limiting devices. Permanent fixed diaphragms or cones used for limiting the useful beam shall provide the same or higher degree of protection as required by the tube housing assembly.

   c. Removable and adjustable beam limiting devices.

      (1) Removable beam-limiting devices shall, for the portion of the useful beam to be blocked by these devices, transmit not more than one percent of the original X-ray beam at the maximum kilovoltage and maximum treatment filter.

      (2) Adjustable beam-limiting devices installed after the effective date of this section shall meet the requirements of paragraph 1.

(3) Adjustable beam-limiting devices installed before the effective date of this section shall, for the portion of the X-ray beam to be blocked by these devices, transmit not more than five percent of the original X-ray beam at the maximum kilovoltage and maximum treatment filter.

d. Filter system. The filter system shall be so designed that:

(1) Filters can not be accidently displaced from the useful beam at any possible tube orientation.

(2) Each filter is marked as to its material of construction and its thickness or wedge angle for wedge filters.

(3) It shall be possible for the operator to determine the presence or absence of each filter and the orientation of each wedge filter in the useful beam when the operator is at the control panel, either by display at the control panel or by direct observation.

(4) The radiation at five centimeters from the filter insertion slot opening does not exceed thirty roentgens per hour under any operating conditions.

e. Tube immobilization. The tube housing assembly shall be capable of being immobilized during stationary treatments.

f. Focal spot marking. The tube housing assembly shall be so marked that it is possible to determine the location of the focal spot to within five millimeters, and such marking shall be readily accessible for use during calibration procedures.

g. Beam block. Contact therapy tube housing assemblies shall have a removable shield of at least five-tenths millimeter lead equivalency at one hundred kilovolts peak that can be positioned over the entire useful beam exit port during periods when the beam is not in use.

h. Beam monitor system. Systems of greater than one hundred fifty kilovolts peak manufactured after the effective date of this section shall be provided with a beam monitor system which:

(1) Shall include a transmission detector which is a full beam detector and which is placed on the patient side of any fixed added filters other than a wedge filter;

(2) Shall have the detector interlocked to prevent incorrect positioning in the useful beam;

(3) Shall not allow irradiation until a preselected value of exposure of roentgens has been made at the treatment control panel;

(4) Shall independently terminate irradiation when the preselection number of roentgens has been reached;

(5) Shall be so designed that, in the event of a system malfunction or electrical power failure, the dose administered to a patient prior to the system malfunction or power failure can be accurately determined;

(6) Shall have the display at the control panel from which reading in roentgens the dose at a reference point in the treatment volume can be calculated;

(7) Shall have a control panel display which maintains the reading until intentionally reset to zero; and

(8) Shall have a control panel display which does not have scale multiplying factors and utilizes a design such that increasing dose is displayed by increasing numbers.

i. Timer.

(1) A timer shall be provided which has a display at the treatment control panel. The timer shall be graduated in minutes and fractions of minutes. The timer shall have a preset time selector and an elapsed time indicator.

(2) The timer shall be a cumulative timer which activates with the radiation and retains its reading after irradiation is interrupted or terminated. After irradiation is terminated and before irradiation can be reinitiated, it shall be necessary to cycle the preset time selector through zero time.

(3) The timer shall terminate irradiation when a preselected time has elapsed.

(4) The timer shall permit accurate presetting and determination of exposure times as short as one second.

(5) The timer shall not permit an exposure if set at zero.

(6) The timer shall comply with the provisions of subdivision m where applicable.

(7) The timer shall not activate until the shutter is opened when patient irradiation is controlled by a shutter mechanism.

j. Control panel functions. The control panel, in addition to the displays required in other provisions of this section shall have:

(1) An indication of whether electrical power is available at the control panel and if activation of the X-ray tube is possible;

(2) An indication of whether X-rays are being produced;

(3) Means for indicating kilovolts and X-ray tube current;

(4) The means for terminating an exposure at any time;

(5) A locking device which will prevent unauthorized use of the X-ray system; and

(6) For X-ray equipment manufactured after the effective date of this section, a positive display of specific filters in the beam.

k. Multiple tubes. When a control panel may energize more than one X-ray tube:

(1) It shall be possible to activate only one X-ray tube during any time interval;

(2) There shall be an indication at the control panel identifying which X-ray tube is energized; and

(3) There shall be an indication at the tube housing assembly when that tube is energized.

l. Source-to-patient distance. There shall be means of determining the source-to-patient distance to within one centimeter.

m. Shutters. Unless it is possible to bring the X-ray output to the prescribed exposure parameters within five seconds, the entire useful beam shall be automatically attenuated by a shutter having a lead equivalency not less than that of the tube housing assembly. In addition,

(1) After the unit is at operating parameters, the shutter shall be controlled electrically by the operator from the control panel; and

(2) An indication of shutter position shall appear at the control panel.

n. Low filtration X-ray tubes. Each X-ray system equipped with a beryllium or other low-filtration window shall be clearly labeled as such upon the tube housing assembly and at the control panel.

2. Facility design requirements for systems capable of operating above fifty kilovolts peak. In addition to shielding adequate to meet requirements of chapters 33-10-04 and 33-10-06, the treatment room shall meet the following design requirements:

a. Warning lights. Treatment rooms to which access is possible through more than one entrance shall be provided with warning lights, in a readily observable position near the outside of all access doors, which will indicate when the useful beam is "on".

b. Voice communication. Provision shall be made for two-way aural communication between the patient and the operator at the control panel; however, where excessive noise levels make aural communication impractical, other methods of communication shall be used.

c. Viewing systems. Windows, mirrors, or closed-circuit television, or an equivalent system shall be provided to permit continuous observation of the patient during irradiation and shall be so located that the operator can observe the patient from the control panel. When the primary viewing system is by electronic means, e.g., television, an alternate viewing system shall be available for use in the event of electronic failure.

d. Additional requirements. Treatment rooms which contain an X-ray system capable of operating above one hundred fifty kilovolts peak shall meet the following additional requirements:

(1) All necessary shielding, except for any beam interceptor, shall be provided by fixed barriers.

(2) The control panel shall be outside the treatment room.

(3) All doors of the treatment room shall be electrically connected to the control panel such that X-ray production cannot occur unless all doors are closed.

(4) When the doors referred to in paragraph 3 are opened while the X-ray tube is activated:

(a) X-ray production shall terminate within one second; or

(b) The radiation at a distance of one meter from the source shall be reduced to less than one hundred milliroentgens per hour within one second.

(5) After the radiation output of the X-ray tube has been affected by the opening of any door referred to in paragraph 3, it shall be possible to restore the X-ray system to full operation only upon:

(a) Closing the door; and subsequently,

(b) Reinitiating the exposure at the control panel.

3. Surveys, calibrations, spot checks, and operating procedures.

a. Surveys.

(1) All new facilities, and existing facilities not previously surveyed, shall have a survey made by, or under the direction of, a qualified expert. Such surveys shall also be done after any change in the facility or equipment which might cause a significant increase in radiation hazard.

(2) The expert shall report one's findings in writing to the person in charge of the facility and a copy of the report shall be maintained by the registrant for inspection by the department.

(3) The survey and report shall indicate all instances where the installation in the opinion of the qualified expert is in violation of applicable regulations and cite all items of noncompliance.

b. Calibration.

(1) The calibration of an X-ray system shall be performed at intervals not to exceed one year and after any change or replacement of components which could cause a change in the radiation output.

(2) The calibration of the radiation output of the X-ray system shall be performed by or under the direction of a qualified expert who is physically present at the facility during such calibration.

(3) Calibration of the radiation output of an X-ray system shall be performed with a calibration instrument. The calibration of such instrument shall be directly traceable to a national standard. The instrument shall have been calibrated within the preceding two years.

(4) The calibrations made pursuant to this subdivision shall be such that the dose at the reference point in soft tissue can be calculated to within ± five percent.

(5) The calibration of the X-ray system shall include, but not be limited to, the following determinations:

(a) Verification that the X-ray system is operating in compliance with the design specifications.

(b) The exposure rates for each combination of field size, technique factors, filter, and treatment distance used.

(c) The degree of congruence between the radiation field and the field indicated by the localizing device if such device is present.

(d) An evaluation of the uniformity of the radiation field symmetry for the field sizes used and any dependence upon tube housing assembly orientation.

(6) Records of calibration performed pursuant to this subdivision shall be maintained by the registrant for two years after completion of the calibration.

(7) A copy of the most recent X-ray system calibration shall be available for use by the operator at the control panel.

c. Spot checks. Spot checks shall be performed on X-ray systems capable of operation at greater than one hundred fifty kilovolts peak. Such spot checks shall meet the following requirements:

(1) The spot check procedures shall be in writing and shall have been developed by a qualified expert.

(2) The measurements taken during the spot checks shall demonstrate the degree of consistency of the operating characteristics which can affect the radiation output of the X-ray system.

(3) The spot check procedure shall specify the frequency at which tests or measurements are to be performed.

(4) The procedure shall also note conditions which shall require that the system be recalibrated in accordance with subdivision b.

(5) Records of spot check measurements performed pursuant to this subdivision shall be maintained by the registrant for two years following such measurement.

d. Operating procedures.

(1) Therapeutic X-ray systems shall not be left unattended unless the system is secured pursuant to paragraph 5 of subdivision j of subsection 1.

(2) When a patient must be held in position for radiation therapy, mechanical supporting or restraining devices shall be used.

(3) The tube housing assembly shall not be held by an individual during exposures.

(4) No individual other than the patient shall be in the treatment room unless such individual is protected by a barrier sufficient to meet the requirements of subsection 1 of section 33-10-04-02. No individual other than the patient shall be in the treatment room during exposures when the kilovolts peak exceeds one hundred fifty.

(5) The X-ray system shall not be used in the administration of radiation therapy unless the requirements of subdivision b of this subsection and paragraph 4 of subdivision c have been met.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-06-09. X-ray and electron therapy systems with energies of one megaelectronvolt and above. Chapter 33-10-09 except subdivisions c and d of subsection 7 of section 33-10-09-03 shall apply to medical facilities using therapy systems with energies one megaelectronvolt and above.

1. Definitions. In addition to the definitions provided in section 33-10-06-02, the following definitions are applicable to this section.

a. "Applicator" means a structure which indicated the extent of the treatment field at a given distance from the virtual source and which may or may not incorporate the beam-limiting device.

b. "Beam scattering filter" means a filter used in order to scatter a beam of electrons.

c. "Central axis of the beam" means a line passing through the virtual source and the center of the plane figure formed by the edge of the final beam-limiting device.

d. "Dose monitoring system" means a system of devices for the detection and display of quantities of radiation.

e. "Dose monitor unit" means a unit from which the absorbed dose can be calculated.

f. "Existing equipment" means therapy systems subject to this section which were manufactured on or before August 1, 1980.

g. "Field flattening filter" means a filter used to homogenize the dose rate over the area of a useful beam of X-ray.

h. "Field size" means the dimensions of an area in a plane perpendicular to the specified direction of the beam of incident radiation at a specific depth in a phantom and defined by specified isodose lines.

i. "Gantry" means that part of the system supporting and allowing possible movements of the radiation head.

j. "Interruption of irradiation" means the stopping of irradiation with the possibility of continuing irradiation without resetting of operating conditions at the control panel.

k. "Isocenter" means a fixed point in space located at the intersection of the rotation axis of the principal movements of the therapy system.

l. "Moving beam therapy" means radiation therapy with relative displacement of the useful beam and the patient during irradiation.

m. "New equipment" means systems subject to this section which were manufactured after August 1, 1980.

n. "Normal treatment distance" means the distance between the virtual source and a reference point on the central axis

of the beam. The reference point is located at a position where the patient will be placed during radiation therapy.

o. "Patient" means an individual subjected to examination and treatment.

p. "Phantom" means a volume of material behaving in a manner similar to tissue with respect to the attenuation and scattering of radiation.

q. "Primary dose monitoring system" means a system which will monitor the quantity of radiation produced during irradiation and which will terminate irradiation when a preselected number of dose monitor units have been acquired.

r. "Radiation treatment prescription" means the absorbed dose which is intended to be delivered to the treatment volume.

s. "Radiation head" means the structure from which the useful beam emerges.

t. "Redundant dose monitoring combination" means a combination of two dose monitoring systems in which both systems are arranged to terminate irradiation in accordance with a preselected number of dose monitor units.

u. "Secondary dose monitoring system" means a system which will terminate irradiation in the event of failure of the primary system.

v. "Shadow tray" means a device attached to the radiation head to support auxiliary beam limiting material.

w. "Stationary beam therapy" means radiation therapy without relative displacement of the useful beam and patient during radiation.

x. "Target" means that part of a radiation source which intercepts a beam of accelerated particles with subsequent emission of other radiation.

y. "Termination of irradiation" means the stopping of irradiation in a fashion which will not permit continuance of irradiation without the resetting of operating conditions at the control panel.

z. "Treatment field" means the area of the patient's skin which is to be irradiated.

aa. "Virtual source" means a point from which radiation appears to originate.

2. Requirements for equipment.

a. Leakage radiation to the patient area.

(1) New equipment shall meet the following requirements:

(a) For all operating conditions, the dose equivalent in rem due to leakage radiation, including X-rays, electrons, and neutrons, at any point in a circular plane of two meters radius centered on and perpendicular to the central axis of the beam at the normal treatment distance and outside the maximum useful beam, shall not exceed one-tenth percent of the maximum dose equivalent in rem of the unattenuated useful beam measured at the point of intersection of the central axis of the beam and the plane surface. Measurements shall be averaged over an area up to but not exceeding one hundred square centimeters at the positions specified.

(b) For each system the registrant shall determine, or obtain from the manufacturer, the leakage radiation existing at the positions specified in subparagraph a for specified operation conditions. Records on leakage radiation shall be maintained at the installation for inspection by the department.

(2) Existing equipment shall meet the following requirements:

(a) The leakage radiation, excluding neutrons, at any point in the area specified by subparagraph a of paragraph 1 where such area intercepts the central axis of the beam one meter from the virtual source, shall not exceed one-tenth percent of the maximum dose equivalent at the point of intersection of the central axis of the beam and the surface of the referenced circular plane. Measurements shall be averaged over an area up to but not exceeding one hundred square centimeters at the positions specified.

(b) For each system, the registrant shall determine, or obtain from the manufacturer, the leakage radiation existing at the positions specified in subparagraph a for specified operating conditions. Records on radiation leakage shall be maintained at the installation for inspection by the department.

b. Leakage radiation outside the patient area.

(1) The dose equivalent in rem due to leakage radiation, except in the area specified in subparagraph a of paragraph 1 of subdivision a, when measured at any point one meter from the path of the charged particle, before the charged particle strikes the target or window, shall not exceed one-tenth percent of X-ray leakage nor five-tenths percent for neutron leakage of the maximum dose equivalent in rem of the unattenuated useful beam measured at the point of intersection of the central axis of the beam and the circular plane specified in subparagraph a of paragraph 1 of subdivision a of this subsection.

(2) The registrant shall determine, or obtain from the manufacturer, the actual leakage radiation existing at the positions specified in paragraph 1 for specified operating conditions. Measurements shall be averaged over an area up to but not exceeding one hundred square centimeters at the positions specified.

c. Beam-limiting devices. Adjustable or interchangeable beam-limiting devices shall be provided and such devices shall transmit no more than two percent of the useful beam for the portion of the useful beam which is to be attenuated by the beam limiting device. The neutron component of the useful beam shall not be included in this requirement. Measurements shall be averaged over an area up to but not exceeding one hundred square centimeters at the normal treatment distance.

d. Filters.

(1) If the absorbed dose rate information required by subdivision p relates exclusively to operation with a field flattening or beam scattering filter in place, such filter shall be removable only by the use of tools.

(2) In systems which utilize a system of wedge filters, interchangeable field flattening filters, or interchangeable beam scattering filters:

(a) Irradiation shall not be possible until a selection of a filter has been made at the treatment control panel;

(b) An interlock system shall be provided to prevent irradiation if the filter selected is not in the correct position;

(c) An indication of the wedge filter orientation with respect to the treatment field shall be provided at the control panel, by direct observation or by electronic means, when wedge filters are used;

(d) A display shall be provided at the treatment control panel showing the filters in use;

(e) Each filter which is removable from the system shall be clearly identified as to that filter's material of construction, thickness, and the wedge angle for wedge filters; and

(f) An interlock shall be provided to prevent irradiation if any filter selection operation carried out in the treatment room does not agree with the filter selection operation carried out at the treatment control panel.

e. Beam quality. The registrant shall determine, or obtain from the manufacturer, data sufficient to assure that the following beam quality requirements are met:

(1) The absorbed dose resulting from X-rays in a useful electron beam at a point on the central axis of the beam ten centimeters greater than the practical range of the electrons shall not exceed the value stated in Table III. Linear interpolation shall be used for values not stated.

TABLE III

Maximum Energy of Electron Beam in MeV	X-ray Absorbed Dose as a Fraction of Maximum Absorbed Dose
1	0.03
15	0.05
35	0.10
50	0.20

(2) Compliance with paragraph 1 shall be determined using:

(a) A measurement within a phantom with the incident surface of the phantom at the normal treatment distance and normal to the central axis of the beam;

(b) The largest field size available which does not exceed fifteen centimeters by fifteen centimeters; and

(c) A phantom whose cross-sectional dimensions exceed the measurement radiation field by at least five centimeters and whose depth is sufficient to perform the required measurement.

(3) The absorbed dose at a surface located at the normal treatment distance, at the point of intersection of that surface with the central axis of the useful beam during X-ray irradiation, shall not exceed the limits stated in Table IV. Linear interpolation shall be used for values not stated.

Table IV

Maximum Photon Energy in MeV	Absorbed Dose at the Surface as a Fraction of the Maximum Absorbed Dose
1	0.80
2	0.70
5	0.60
15	0.50
35	0.40
50	0.20

(4) Compliance with paragraph 3 shall be determined by:

(a) Measurements made within a phantom using an instrument which will allow extrapolation to the surface absorbed dose;

(b) Use of a phantom whose size and placement meet the requirements of paragraph 2;

(c) Removal of all beam modifying devices which can be removed without the use of tools, except for beam scattering or beam flattening filters; and

(d) The largest field size available which does not exceed fifteen centimeters by fifteen centimeters.

(5) The registrant shall determine, or obtain from the manufacturer, the maximum percentage absorbed dose due to stray neutrons in the useful beam for specified operating conditions.

f. Beam monitors. All therapy systems shall be provided with radiation detectors in the radiation head.

(1) New equipment shall be provided with at least two radiation detectors. The detectors shall be incorporated into two monitoring systems arranged either as a primary/primary combination or as a primary/secondary combination.

(2) Existing equipment shall be provided with at least one radiation detector. This detector shall be incorporated into a primary system.

(3) The detectors and system into which the detector is incorporated shall meet the following requirements:

(a) Each primary system shall have a detector which is a transmission detector and a full beam detector and which is placed on the patient side of any fixed added filters other than a wedge filter.

(b) The detectors shall be removable only with tools and shall be interlocked to prevent incorrect positioning.

(c) Each detector shall be capable of independently monitoring and controlling the useful beam.

(d) Each detector shall form part of a dose monitoring system from whose readings in dose monitor units the absorbed dose at a reference point in the treatment volume can be calculated.

(e) For new equipment the design of the dose monitoring systems of subparagraph d shall assure that the malfunctioning of one system shall not affect the correct functioning of the second system. In addition:

[1] The failure of any element which may be common to both systems shall terminate the useful beam.

[2] The failure of any element common to both systems which could affect the correct function of both systems shall terminate irradiation.

(f) Each dose monitoring system shall have a legible display at the treatment control panel. Each display shall:

[1] Maintain a reading until intentionally reset to zero;

[2] Have only one scale and no scale multiplying factors in new equipment; and

[3] Utilize a design such that increasing dose is displayed by increasing numbers and shall be so designed that, in the event of an overdosage of radiation, the absorbed dose may be accurately determined under all normal conditions of use or foreseeable failures.

(g) In the event of power failure, the dose monitoring information required in subparagraph f displayed at the control panel at the time of failure shall be retrievable in at least one system.

g. Beam symmetry.

(1) For new equipment, each therapy machine shall have the capability of comparing the dose rates in each of the four quadrants of the central eighty percent of the useful beam. Beam symmetry information shall be displayed at the treatment control panel, and such display shall be capable of indicating a differential of more than five percent between any two of the quadrant dose rates. Beam asymmetry in excess of twenty percent shall automatically terminate the useful beam.

(2) Beam symmetry requirements of paragraph 1 shall be met if the user can demonstrate to the satisfaction of the department that adequate fail-safe protection against the beam asymmetry is incorporated into the inherent design of the accelerator.

(3) On existing equipment where the department has determined that beam symmetry is inadequate the use of an automatic beam asymmetry warning system may be required.

h. Selection and display of dose monitor units.

(1) Irradiation shall not be possible until a selection of a number of dose monitor units has been made at the treatment control panel.

(2) After useful beam termination, it shall be necessary to manually reset the preselected dose monitor units before treatment can be reinitiated.

(3) The preselected number of dose monitor units shall be displayed at the treatment control panel until reset manually for the next irradiation.

i. Termination of irradiation by the dose monitoring system.

(1) Each of the required monitoring systems shall be capable of independently terminating irradiation. Provisions shall be made to test the correct operation of each system.

(2) Each primary system shall terminate irradiation when the preselected number of dose monitor units has been detected by the system.

(3) Each secondary system shall terminate irradiation when one hundred two percent of the preselected number of dose monitor units has been detected by the system.

(4) For new equipment, indicators on the control panel shall show which monitoring system has terminated the beam.

j. Interruption switches. It shall be possible to interrupt irradiation and equipment movements at any time from the operator's position at the treatment control panel. Following an interruption, it shall be possible to restart irradiation by operator action without any reselection of operating conditions. If any change is made of a preselected value during an interruption, the equipment shall move to termination condition.

k. Termination switches. It shall be possible to terminate irradiation and equipment movements, or go from an interruption condition to termination conditions, at any time from the operator's position at the treatment control panel.

l. Timer.

(1) A timer shall be provided which has a display at the treatment control panel. The timer shall be graduated in minutes and decimals of minutes. The timer shall have a preset time selector and an elapsed time indicator.

(2) The timer shall be a cumulative timer which switches on and off with the radiation and retains its reading after irradiation is interrupted or terminated. It shall be necessary to zero and subsequently reset the elapsed time indicator and the preset time selector

after irradiation is terminated before irradiation shall again be possible.

(3) The timer shall terminate irradiation when a preselected time has elapsed if the dose monitor systems fail to do so.

m. Selection of radiation type. Equipment capable of both X-ray therapy and electron therapy shall meet the following requirements:

(1) Irradiation shall not be possible until a selection of radiation type has been made at the treatment control panel.

(2) An interlock system shall be provided to ensure that the equipment can emit only the radiation type which has been selected.

(3) An interlock system shall be provided to prevent irradiation if any selected operations carried out in the treatment room do not agree with the selected operations carried out at the treatment control panel.

(4) An interlock system shall be provided to prevent irradiation with X-rays when electron applicators are fitted and irradiation with electrons when accessories specific for X-ray therapy are fitted.

(5) The radiation type selected shall be displayed at the treatment control panel before and during irradiation.

n. Selection of energy. Equipment capable of generating radiation beams of different energies shall meet the following requirements:

(1) Irradiation shall not be possible until a selection of energy has been made at the treatment control panel.

(2) An interlock system shall be provided to ensure that the equipment can emit only the energy of radiation which has been selected.

(3) An interlock system shall be provided to prevent irradiation if any selected operations carried out in the treatment room do not agree with the selected operations carried out at the treatment control panel.

(4) The energy selected shall be displayed at the treatment control panel before and during irradiation.

o. Selection of stationary beam therapy or moving beam therapy. Equipment capable of both stationary beam therapy and moving beam therapy shall meet the following requirements:

(1) Irradiation shall not be possible until a selection of stationary beam therapy or moving beam therapy has been made at the treatment control panel.

(2) An interlock system shall be provided to ensure that the equipment can operate only in the mode which has been selected.

(3) An interlock system shall be provided to prevent irradiation if any selected operations carried out in the treatment room do not agree with the selected operations carried out at the treatment control panel.

(4) An interlock system shall be provided to terminate irradiation if the movement stops during moving beam therapy.

(5) Moving beam therapy shall be so controlled that the required relationship between the number of dose monitor units and movement is obtained.

(6) The mode of operation shall be displayed at the treatment control panel.

p. Absorbed dose rate. For new equipment, a system shall be provided from whose readings the absorbed dose rate at a reference point in the treatment volume can be calculated (the radiation detectors specified in subdivision f may form part of this system). In addition:

(1) The quotient of the number of dose monitor units by time shall be displayed at the treatment control panel.

(2) If the equipment can deliver under any conditions an absorbed dose rate at the normal treatment distance more than twice the maximum value specified by the manufacturer's anticipated dose rate for any machine parameters utilized, a device shall be provided which terminates irradiation when the absorbed dose rate exceeds a value twice the specified maximum. The value at which the irradiation will be terminated shall be a record maintained by the registrant.

q. Location of focal spot and beam orientation. The registrant shall determine, or obtain from the manufacturer, the location with reference to an accessible point on the radiation head of:

(1) The X-ray target or the virtual source of X-rays.

(2) The electron window or the scattering foil.

(3) All possible orientations of the useful beam.

r. System checking facilities. Capabilities shall be provided so that all radiation safety interlocks can be checked. When preselection of any of the operating conditions requires action in the treatment room and at the treatment control panel, selection at one location shall not give a display at the other location until the requisite selected operations in both locations have been completed.

s. Shadow trays shall be designed such that the skin entrance dose due to electrons produced within the shadow tray are minimized.

3. Facility and shielding requirements. In addition to chapter 33-10-04, the following design requirements shall apply:

a. Except for entrance doors or beam interceptors, all the required barriers shall be fixed barriers.

b. The treatment control panel shall be located outside the treatment room.

c. Windows, mirrors, closed-circuit television, or other equivalent viewing systems shall be provided to permit continuous observation of the patient during irradiation and shall be so located that the operator may observe the patient from the treatment control panel. When the viewing system is by electronic means, e.g., television, an alternate viewing system shall be provided for use in the event of failure of the primary system.

d. Provision shall be made for two-way aural communication between the patient and the operator at the treatment control panel. However, where excessive noise levels makes aural communication impractical other methods of communication shall be used.

e. Treatment rooms to which access is possible through more than one entrance shall be provided with warning lights, which will indicate when the useful beam is "on" in a readily observable position near the outside of all access doors.

f. Interlocks shall be provided such that all entrance doors shall be closed before treatment can be initiated or continued. If the radiation beam is interrupted by any door opening, it shall be possible to restore the machine to operation only by closing the door and reinitiating exposure by manual action at the control panel.

4. Surveys, calibrations, spot checks, and operating procedures.

a. Surveys.

(1) All new facilities, and existing facilities not previously surveyed, shall have a survey made by, or under the direction of, a qualified expert. Such surveys shall also be done after any change in the facility or equipment which might cause a significant increase in radiation hazard.

(2) The registrant shall obtain a written report of the survey from the qualified expert and a copy of the report shall be transmitted by the registrant to the department.

(3) The survey and report shall indicate all instances where the installation, in the opinion of the qualified expert, is in violation of applicable regulations and shall cite the section violated.

b. Calibrations.

(1) The calibration of systems subject to this section shall be performed before the system is first used for irradiation of patient and thereafter at time intervals which do not exceed six months and after any change which might significantly alter the calibration, spatial distribution, or other characteristics of the therapy beam.

(2) The calibration shall be performed under the direct supervision of a qualified expert.

(3) Calibration of the dose equivalent of the therapy beam shall be performed with a measurement instrument the calibration of which is directly traceable to national standards of exposure or absorbed dose and which shall have been calibrated within the preceding two years.

(4) Calibrations made pursuant to subdivision b shall be such that the dose at a reference point in soft tissue can be calibrated within $\pm$ five percent.

(5) The calibration of the therapy beam shall include but be not limited to the following determinations:

(a) Verification that the equipment is operating in compliance with the design specifications concerning the light localizer, the sidelight and back-pointer alignment with the isocenter, when applicable, variation in the axis of rotation for the table, gantry and jaw system, and beam flatness and symmetry at specified depths.

(b) The exposure rate or dose rate in air and at various depths of water for the range of field sizes used, for each effective energy, and for each treatment distance used for radiation therapy.

(c) The congruence between the radiation field and the field indicated by the localizing device.

(d) The uniformity of the radiation field and its dependency upon the direction of the useful beam.

(e) The calibration determinations above shall be provided in sufficient detail such that the absorbed dose to issue in the useful beam may be calculated to within ± five percent.

(6) Records of the calibration performed pursuant to paragraph 1 shall be maintained by the registrant for two years after completion of the calibration.

(7) A copy of the latest calibration performed pursuant to paragraph 1 shall be available for use by the operator at the treatment control panel.

c. Spot checks. Spot checks shall be performed on systems subject to this section. Such spot checks shall meet the following requirements:

(1) The spot check procedures shall be in writing and shall have been developed by a qualified expert.

(2) The measurements taken during spot checks shall demonstrate the degree of consistency of the operating characteristics which can affect the radiation output of the system or the radiation delivered to a patient during a therapy procedure.

(3) The spot check procedures shall specify the frequency at which tests or measurements are to be performed.

(4) For systems in which beam quality can vary significantly, spot checks shall include quality checks.

(5) Where a system has built-in devices which provide a self-check of any parameter during irradiation, the spot check procedures shall require that the parameter be independently verified at specific time intervals.

(6) The reasons for spot checks which are erratic or inconsistent with calibration data shall be promptly investigated and corrected before the system is used for patient irradiation.

(7) Whenever a spot check indicates a significant change, as specified in the qualified expert's spot check procedures, in the operation characteristics of a system, the system shall be recalibrated as required in subdivision b.

(8) Records of spot check measurements performed pursuant to subdivision c shall be maintained by the registrant for a period of one year.

d. Operating procedures.

(1) No individual other than the patient shall be in the treatment room during treatment of a patient.

(2) If a patient must be held in position during treatment, mechanical supporting or restraining devices shall be used.

(3) The system shall not be used in the administration of radiation therapy unless subdivisions a, b, and c have been met.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-06-10. Veterinary medicine radiographic installations. In addition to the requirements of sections 33-10-06-03 and 33-10-06-04, the following regulations shall apply to all veterinary medicine radiographic installations:

1. Equipment.

a. The protective tube housing shall be of diagnostic type.

b. Diaphragms or cones shall be provided for collimating the useful beam to the area of clinical interest and shall provide the same degree of protection as is required of the housing.

c. The total filtration permanently in the useful beam shall not be less than five-tenths millimeters aluminum equivalent for machines operating up to fifty kilovolts peak, one and one-half millimeters aluminum equivalent for machines operating between fifty and seventy kilovolts peak, and two and one-half millimeters aluminum equivalent for machines operating above seventy kilovolts peak.

d. A device shall be provided to terminate the exposure after a preset time or exposure.

e. A dead-man type of exposure switch shall be provided, together with an electrical cord of sufficient length, so that the operator can stand out of the useful beam and at least six feet [1.83 meters] from the animal during all X-ray exposures.

2. Structural shielding. All wall, ceiling, and floor areas shall be equivalent to or provided with applicable protective barriers as required in Appendix C of this chapter.

3. Operating procedures.

a. The operator shall stand well away from the useful beam and the animal during radiographic exposures.

b. No individual other than the operator shall be in the X-ray room while exposures are being made unless such individual's assistance is required.

c. When an animal must be held in position during radiography, mechanical supporting or restraining devices should be used. If the animal must be held by an individual, that individual shall be protected with appropriate shielding devices, such as protective gloves and apron, and the individual shall be so positioned that no part of the individual's body will be struck by the useful beam. The exposure of any individual used for this purpose shall be monitored.

General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

APPENDIX E
INFORMATION TO BE SUBMITTED BY PERSONS PROPOSING TO CONDUCT HEALING ARTS SCREENING

Persons requesting that the department approve a healing arts screening program shall submit the following information and evaluation:

1. Name and address of the applicant and, where applicable, the names and addresses of agents within this state.

2. Diseases or conditions for which the X-ray examinations are to be used.

3. Description in detail of the X-ray examinations proposed in the screening program.

4. Description of the population to be examined in the screening program, i.e., age, sex, physical condition, and other appropriate information.

5. Any evaluation of any known alternate methods not involving ionizing radiation which could achieve the goals of the screening program and why these methods are not used in preference to the X-ray examinations.

6. An evaluation by a qualified expert on the X-ray systems to be used in the screening program. The evaluation by the qualified expert shall show that such systems do satisfy all requirements of these regulations.

7. A description of the diagnostic film quality control program.

8. A copy of the technique chart for the X-ray examination procedure to be used.

9. The qualifications of each individual who will be operating the X-ray systems.

10. The qualifications of the individual who will be supervising the operators of the X-ray systems. The extent of supervision and the method of work performance evaluation shall be specified.

11. The name and address of the individual who will interpret the radiographs.

12. A description of the procedures to be used in advising the individuals screened and their private practitioners of the healing arts of the results of the screening procedure and any further medical needs indicated.

13. A description of the procedures for the retention or disposition of the radiographs and other records pertaining to the X-ray examinations.

History: Effective October 1, 1982.

33-10-07-03. Teletherapy.

1. Equipment.

   a. The housing shall be so constructed that, at one meter from the source, the maximum exposure rate does not exceed ten 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 meter from the source, shall not exceed two milliroentgens per hour.

   b. For teletherapy equipment installed after April 4, 1977, the leakage radiation measured at one meter from the source when the beam control mechanism is in the "on" position shall not exceed one-tenth of one percent of the useful beam exposure rate.

   c. Adjustable or removable beam-defining diaphragms shall allow transmission of not more than five percent of the useful beam exposure rate.

   d. The beam control mechanism shall be of a positive design capable of acting in any orientation 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 or 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. The equipment shall be provided with a locking device to prevent unauthorized use.

   i. The control panel shall be provided with a timer that automatically terminates the exposure after a preset time.

   j. Provision shall be made to permit continuous observation of patients during irradiation.

k. Each teletherapy room shall be equipped with a radiation monitoring device which continuously monitors the teletherapy beam condition. The monitoring device shall be equipped with a backup battery power supply for emergencies due to electrical power failures.

2. Operation. No individual shall be in the treatment room during irradiation unless that individual is the patient. Mechanical restraining or supporting devices shall be used for positioning the patient, if necessary.

3. Testing for leakage and contamination. Teletherapy sources shall be tested for leakage and contamination in accordance with the procedures described in subsection 2 of section 33-10-07-02. Tests of leakage may be made by wiping accessible surfaces of the housing port or collimator while the source is in the "off" position and measuring these wipes for transferred contamination.

4. a. Full calibration measurements shall be performed by licensees 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 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 year.

b. Full calibration measurements shall include determination of:

(1) The exposure rate or dose rate to an accuracy within ± three percent for the range of field sizes and for the range of distances (or for the axis distance) used in radiation therapy;

(2) The congruence between the radiation field and the field indicated by the light beam localizing device;

(3) The uniformity of the radiation field and its dependence upon the orientation of the useful beam;

(4) Timer accuracy; and

(5) The accuracy of all distance measuring devices used for treating humans.

c. Full calibration measurements shall be made in accordance with the procedures recommended by the scientific committee on radiation dosimetry of the Amercian association of physicists in medicine (Physics in Medicine and Biology, Vol. 16, No. 3, 1971, pp. 379-396).

d. The exposure rate or dose rate values shall be corrected mathematically for physical decay for intervals not exceeding one month.

e. Full calibration measurements and physical decay corrections shall be performed by an expert qualified by training and experience in accordance with subdivision a of subsection 7.

5. a. Spot check measurements shall be performed on each teletherapy unit at intervals not exceeding one month.

b. Spot check measurements shall include determination of:

(1) Timer accuracy;

(2) The congruence between the radiation field and the field indicated by the light beam localizing device;

(3) The accuracy of all distance measuring devices used for treating humans;

(4) The exposure rate, dose rate, or a quantity related in a known manner to these rates for one typical set of operating conditions; and

(5) The difference between the measurement made in 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.

c. Spot check measurements shall be performed in accordance with procedures established by an expert qualified by training and experience in accordance with subdivision a of subsection 7. (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 days.

6. a. Full calibration measurements 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 years and after any servicing that may have affected system calibration.

   b. Spot check measurements shall be performed using a dosimetry system that has been calibrated in accordance with subdivision a of this subsection. 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 subdivision a of this subsection. This alternative calibration method shall have been performed within the previous one year and after each servicing that may have affected system calibration. Dosimetry systems calibrated by this alternative method shall not be used for full calibration measurements.

7. 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:

   a. Is certified by the Amercian board of radiology in therapeutic radiological physics, radiological physics, roentgen-ray and gamma-ray physics, or X-ray and radium physics; or

   b. Has the following minimum training and experience:

      (1) A master's or doctor's degree in physics, biophysics, radiological physics or health physics;

      (2) One year of full-time training in therapeutic radiological physics;

      (3) One year of full-time experience in a radiotherapy facility including personal calibration and spot check of at least one teletherapy unit; and

      (4) Licensees that have their teletherapy units calibrated by persons who do not meet criteria for minimum training and experience may request a license amendment excepting them from this subsection. The

request should include the name of the proposed qualified expert, a description of the proposed expert's training and experience including information similar to that specified in this subdivision, reports of at least one calibration and spot check program based on measurements personally made by the proposed expert within the last ten years, and written endorsement of the technical qualifications of the proposed expert from personal knowledge by a physicist certified by the American board of radiology in one of the specialties listed in subdivision a.

8. The licensee shall maintain, for inspection by the department, records of the measurements, tests, corrective actions, and instrument calibration made under subsections 4 and 5 and records of the licensee's evaluation of the qualified expert's training and experience made under subsection 7.

   a. Records of (1) full calibration measurements, and (2) calibration of the instruments used to make these measurements shall be preserved for five years after completion of the full calibration.

   b. Records of (1) spot check measurements and corrective actions, and (2) calibration of instruments used to make spot check measurements shall be preserved for two years after completion of the spot check measurements and corrective actions.

   c. Records of the licensee's evaluation of the qualified expert's training and experience shall be preserved for five years after the qualified expert's last performance of a full calibration of the licensee's teletherapy unit.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-08-02. Definitions.

1. "Analytical X-ray equipment" means equipment used for X-ray diffraction or fluorescence analysis.

2. "Analytical X-ray system" means a group of local and remote components utilizing X-rays to determine the elemental composition or to examine the microstructure of materials. Local components include those that are struck by X-rays such as radiation source housings, port and shutter assemblies, collimators, sample holders, cameras, goniometers, detectors and shielding. Remote components include power supplies, transformers, amplifiers, readout devices, and control panels.

3. "Fail-safe characteristics" means a design feature which causes beam port shutters to close, or otherwise prevents emergence of the primary beam, upon the failure of a safety or warning device.

4. "Local components" means part of an analytical X-ray system and includes areas that are struck by X-rays such as radiation source housings, port and shutter assemblies, collimeters, sample holders, cameras, goniometers, detectors and shielding, but do not include power supplies, transformers, amplifiers, readout devices, and control panels.

~~4.~~ 5. "Normal operating procedures" means operating procedures for conditions suitable for analytical purposes with shielding and barriers in place. These do not include maintenance but do include routine alignment procedures. Routine and emergency radiation safety considerations are part of these procedures.

~~5.~~ 6. "Open-beam configuration" means an analytical X-ray system in which an individual could accidentally place some part of the individual's body in the primary beam path during normal operation.

~~6.~~ 7. "Primary beam" means ionizing radiation which passes through an aperture of the source housing by a direct path from the X-ray tube or a radioactive source located in the radiation source housing.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-08-05. Operating requirements.

1. Procedures. Normal operating procedures shall be written and available to all analytical X-ray equipment workers. No person shall be permitted to operate analytical X-ray equipment in any manner other than that specified in the procedures unless such person has obtained written approval of the radiation safety officer.

2. Bypassing. No person shall bypass a safety device unless such person has obtained the approval of the radiation safety officer. Such approval shall be for a specified period of time. When a safety device has been bypassed, a readily discernible sign bearing the words "SAFETY DEVICE NOT WORKING", or words having a similar intent, shall be placed on the radiation source housing.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-09-03. Radiation safety requirements for the use of particle accelerators.

1. General provisions.

   a. This section establishes radiation safety requirements for the use of particle accelerators. The provisions of this section are in addition to, and not in substitution for, other applicable provisions of the chapter.

   b. The registrant shall be responsible for assuring that all requirements of this chapter are met.

2. Limitations.

   a. No registrant shall permit any person to act as a particle accelerator operator until such person shall have all of the following:

      (1) Been instructed in radiation safety and shall have demonstrated an understanding thereof.

      (2) Received copies of and instruction in this chapter and the applicable requirements of chapters 33-10-04 and 33-10-10, pertinent registration conditions and the registrant's operating and emergency procedures, and shall have demonstrated understanding thereof.

      (3) Demonstrated competence to use the particle accelerator, related equipment, and survey instruments which will be employed in the person's assignment.

   b. Either the radiation safety committee or the radiation safety officer shall have the authority to terminate the operations at a particle accelerator facility if such action is deemed necessary to protect health and minimize danger to public health and safety or property.

3. Shielding and safety design requirements.

   a. A qualified expert, specifically accepted by the department, shall be consulted in the design of a particle accelerator installation and called upon to perform a radiation survey when the accelerator is first capable of producing radiation.

   b. Each particle accelerator installation shall be provided with such primary or secondary barriers as are necessary to assure compliance with subsections 1 and 5 of section 33-10-04-02.

4. Particle accelerator controls and interlock systems.

a. Instrumentation, readouts, and controls on the particle accelerator control console shall be clearly identified and easily discernible.

b. All entrances into a target room or other high radiation area shall be provided with interlocks that shut down the machine under conditions of barrier penetration.

c. When an interlock system has been tripped, it shall only be possible to resume operation of the accelerator by manually resetting controls at the position where the interlock has been tripped, and lastly at the main control console.

d. Each safety interlock shall be on a circuit which shall allow its operation independently of all other safety interlocks.

e. All safety interlocks shall be fail-safe, i.e., designed so that any defect or component failure in the interlock system prevents operation of the accelerator.

f. A scram button or other emergency power cutoff switch shall be located and easily identifiable in all high radiation areas. Such a cutoff switch shall include a manual reset so that the accelerator cannot be restarted from the accelerator control console without resetting the cutoff switch.

5. Warning devices.

a. All locations designated as high radiation areas, and entrances to such locations, shall be equipped with easily observable flashing or rotating warning lights that operate when, and only when, radiation is being produced.

b. Except in facilities designed for human exposure, each high radiation area shall have an audible warning device which shall be activated for fifteen seconds prior to the possible creation of such high radiation area. Such warning device shall be clearly discernible in all high radiation areas and all radiation areas.

c. Barriers, temporary or otherwise, and pathways leading to high radiation areas shall be identified in accordance with subsection 3 of section 33-10-04-03.

6. Operating procedures.

a. Particle accelerators, when not in operation, shall be secured to prevent unauthorized use.

b. Only a switch on the accelerator control console shall be routinely used to turn the accelerator beam on and off. The safety interlock system shall not be used to turn off the accelerator beam except in an emergency.

c. All safety and warning devices, including interlocks, shall be checked for proper operability at intervals not to exceed three months. Results of such tests shall be maintained for inspection at the accelerator facility.

d. Electrical circuit diagrams of the accelerator, and the associated interlock systems, shall be kept current and maintained for inspection by the department and available to the operator at each accelerator facility.

e. If, for any reason, it is necessary to intentionally bypass a safety interlock or interlocks, such action shall be all of the following:

(1) Authorized by the radiation safety committee or radiation safety officer.

(2) Recorded in a permanent log and a notice posted at the accelerator control console.

(3) Terminated as soon as possible.

f. A copy of the current operating and the emergency procedures shall be maintained at the accelerator control panel.

7. Radiation monitoring requirements.

a. There shall be available at each particle accelerator facility, appropriate portable monitoring equipment which is operable and has been calibrated for the appropriate radiations being produced at the facility. Such equipment shall be tested for proper operation daily and calibrated at intervals not to exceed one year, and after each servicing and repair.

b. A radiation protection survey shall be performed and documented by a qualified expert specifically approved by the department when changes have been made in shielding, operation, equipment, or occupancy of adjacent areas.

c. Radiation levels in all high radiation areas shall be continuously monitored. The monitoring devices shall be electrically independent of the accelerator control and interlock systems and capable of providing a remote and local readout with visual or audible alarms at both the control panel and at entrance to high radiation areas, and

other appropriate locations, so that people entering or present become aware of the existence of the hazard.

d. All area monitors shall be calibrated ~~quarterly~~ annually.

e. Whenever applicable, periodic surveys shall be made to determine the amount of airborne particulate radioactivity present in areas of airborne hazards.

f. Whenever applicable, periodic smear surveys shall be made to determine the degree of contamination in target and other pertinent areas.

g. All area surveys shall be made in accordance with the written procedures established by a qualified expert, or the radiation safety officer of the particle accelerator facility.

h. Records of all radiation protection surveys, calibration results, instrumentation tests, and smear results shall be kept current and on file at each accelerator facility.

8. Ventilation systems.

~~a. Adequate ventilation shall be provided in areas where airborne radioactivity may be produced.~~

a. Means shall be provided to ensure that personnel entering any area where airborne radioactivity may be produced will not be exposed to airborne radioactive material in excess of these limits specified in chapter 33-10-04, Appendix A, Table II.

b. A registrant, as required by subsection 6 of section 33-10-04-02, shall not vent, release, or otherwise discharge airborne radioactive material to an uncontrolled area which exceeds the limits specified in chapter 33-10-04, Appendix A, Table II, except as authorized pursuant to subsection 2 of section 33-10-04-04 or subdivision b of subsection 6 of section 33-10-04-02. For purposes of this subdivision, concentrations may be averaged over a period not greater than one year. Every reasonable effort should be made to maintain releases of radioactive material to uncontrolled areas, as far below these limits as practicable.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

33-10-10-01. Purpose and scope. This chapter establishes requirements for notices, instructions, and reports by licensees or registrants to individuals engaged in work under a license or registration and options available to such individuals in connection with department inspections of licensees or registrants to ascertain compliance with the provisions of North Dakota Century Code chapter 23-20.1 and regulations, orders, and licenses issued thereunder regarding radiological working conditions. This chapter applies to all persons who receive, possess, use, own, or transfer material licensed by or registered with the department pursuant to chapters 33-10-02 and 33-10-03.

1. Posting of notices to workers.

   a. Each licensee or registrant shall post current copies of the following documents:

      (1) This chapter and chapter 33-10-04.

      (2) The license, certificate of registration, conditions, or documents incorporated into the license by reference and amendments thereto.

      (3) The operating procedures applicable to work under the license or registration.

      (4) Any notice of violation involving radiological working conditions, proposed imposition of civil penalty, or order issued pursuant to chapter 33-10-01, and any response from the licensee or registrant.

   b. If posting of a document specified in paragraphs 1, 2, or 3 of subdivision a is not practicable, the licensee or registrant may post a notice which describes the document and states where it may be examined.

   c. Department Form RAD 681 "Notice to Employees" shall be posted by each licensee or registrant wherever individuals work in or frequent any portion of a restricted area.

   d. Documents, notices, or forms posted pursuant to this subsection 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.

   e. Department documents posted pursuant to paragraph 3 of subdivision a shall be posted within two working days after receipt of the documents from the department. The licensee's or registrant's response, if any, shall be

posted within two working days after dispatch from the licensee or registrant. Such documents shall remain posted for a minimum of five working days or until action correcting the violation has been completed, whichever is later.

2. Instructions to workers. All individuals working in or frequenting any portion of a restricted area shall be kept informed of the storage, transfer, or use of radioactive material or of radiation in such portions of the restricted area; 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; shall be instructed in, and instructed to observe, to the extent within the worker's control, the applicable provisions of department regulations and licenses for the protection of personnel from exposures to radiation or radioactive material occurring in such areas; 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 department regulations and licenses or unnecessary exposure to radiation or radioactive material; 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 shall be advised as to the radiation exposure reports which workers may request pursuant to subsection 3. The extent of these instructions shall be commensurate with potential radiological health protection problems in the restricted area.

3. Notifications and reports to individuals.

   a. 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 subsection. The information reported shall include data and results obtained pursuant to department regulations, orders, or license conditions, as shown in records maintained by the licensee or registrant pursuant to department regulations. Each notification and report shall: be in writing; include appropriate identifying data such as the name of the licensee or registrant, the name of the individual, and the individual's social security number; include the individual's exposure information; and contain the following statement:

      This report is furnished to you under the provisions of North Dakota State Radiological Health Regulations (North Dakota Administrative Code chapter 33-10-10).

You should preserve this report for further reference.

b. 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 subdivisions a and c of subsection 1 of section 33-10-04-05.

c. 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 days from the time the request is made, or within thirty 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 material licensed by, or radiation machines registered with the department; and shall include the dates and locations of work under the license or registration in which the worker participated during this period.

d. When a licensee or registrant is required pursuant to subsection 5 of section 33-10-04-05 to report to the department any exposure of any individual to radiation or radioactive material, the licensee or the registrant shall also provide the individual a report on the individual's exposure data included therein. Such reports shall be transmitted at a time not later than the transmittal to the department.

e. 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 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 the worker from operations of the licensee or registrant during that specifically identified calendar quarter or fraction thereof, or provide a written statement of that dose if the finally determined personnel monitoring results are not available at that time. Estimated doses shall be clearly indicated as such.

4. Presence of representatives of licensees or registrants and workers during inspection.

   a. Each licensee or registrant shall afford to the department at all reasonable times opportunity to inspect materials, machines, activities, facilities, premises, and records pursuant to this article.

   b. During an inspection, department inspectors may consult privately with workers as specified in subsection 5. The licensee or registrant may accompany department inspectors during other phases of an inspection.

   c. If, at the time of inspection, an individual has been authorized by the workers to represent them during department 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.

   d. Each workers' representative shall be routinely engaged in work under control of the licensee or registrant and shall have received instructions as specified in subsection 2.

   e. 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 the inspection. However, only one workers' representative at a time may accompany the inspectors.

   f. 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 department inspectors during the inspection of physical working conditions.

   g. Notwithstanding the other provisions of this subsection, department 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.

5. Consultation with workers during inspections.

a. Department inspectors may consult privately with workers concerning matters of occupational radiation protection and other matters related to applicable provisions of department regulations and licenses to the extent the inspectors deem necessary for the conduct of an effective and thorough inspection.

b. 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 the worker has reason to believe may have contributed to or caused any violation of North Dakota Century Code chapter 23-20.1, this article, 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 subdivision a of subsection 6.

c. The provisions of subdivision b shall not be interpreted as authorization to disregard instructions pursuant to subsection 2.

6. Requests by workers for inspections.

a. Any worker or representative of workers who believes that a violation of North Dakota Century Code chapter 23-20.1, this article, 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 department. 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 department no later than at the time of inspection except that, upon the request of the worker giving such notice, the worker's 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 department, except for good cause shown.

b. If, upon receipt of such notice, the department determines that the complaint meets the requirements set forth in subdivision a, and that there are reasonable grounds to believe that the alleged violation exists or has occurred, the department 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 subsection need not be limited to matters referred to in the complaint.

c. No 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 this article or has testified or is about to testify in any such proceeding or because of the exercise by such worker on behalf of the worker or others of any option afforded by this chapter.

7. Inspections not warranted - informal review.

a. If the department determines, with respect to a complaint under subsection 6, that an inspection is not warranted because there are no reasonable grounds to believe that a violation exists or has occurred, the department 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 department which 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 department which will provide the complainant with a copy of such statement by certified mail. Upon the request of the complainant, the department may hold an informal conference in which the complainant and the licensee or registrant may orally present their views. An informal conference 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. The department shall render an informal opinion after the close of the conference. The complainant shall have the right of petition for a formal administrative hearing as provided for by North Dakota Century Code chapter 28-32 and department regulations, following the decision of such formal conference.

b. If the department determines that an inspection is not warranted because the requirements of subdivision a of subsection 6 have not been met, the department 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 subdivision a of subsection 6.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02

STAFF COMMENT: Chapter 33-10-11 contains all new material but is not underscored so as to improve readability.

CHAPTER 33-10-11
FEES FOR ISSUANCE OF LICENSE AND REGISTRATION CERTIFICATES

Section
33-10-11-01 Purpose
33-10-11-02 Scope
33-10-11-03 Exemptions
33-10-11-04 Payment of Fees
33-10-11-05 Failure by Applicant or Licensee to Pay Prescribed Fees

33-10-11-01. Purpose. This chapter establishes fees charged for the issuance of licenses and registration certificates by the department.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 23-20.1-04

33-10-11-02. Scope. This chapter applies to a person who is an applicant for, or a holder of, a radioactive material license or a registration certificate issued by the department.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 23-20.1-04

33-10-11-03. Exemptions. No application fees, license fees, amendment fees, renewal fees, or special project fees, shall be required for:

1. A license authorizing the use of source material as shielding only in devices and containers; provided, however, that all other licensed byproduct material, source material, or special nuclear material in the device or container will be subject to the fees prescribed in Appendix A of this chapter.

2. The department may, upon application by an interested person, or upon its own initiative, grant such exemptions from the

requirements of this part as it determines are authorized by law and are otherwise in the public interest.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 23-20.1-04

33-10-11-04. Payment of fees.

1. License and registration fees. The appropriate licensing or registration fee shall accompany the application for licensure or registration when filed with the department.

2. Amendment fees. The appropriate amendment fee shall accompany the application for amendment when filed with the department.

3. Renewal fees. The appropriate renewal fee shall accompany the renewal application when filed with the department.

4. Special project fees. Fees for special projects are payable upon notification by the department when the review of the project is completed. Special projects means those projects submitted to the department for review and for which specific fees are not prescribed in this chapter.

5. Method of payment. Fee payments shall be by check, draft, or money order made payable to the North Dakota state department of health.

6. Return of application and fee payment. The application for licensure or registration shall be accompanied by the fee payment and shall be submitted to:

   North Dakota State Department of Health
   Fiscal Office
   State Capitol Building
   Bismarck, ND 58505

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 23-20.1-04

33-10-11-05. Failure by applicant or licensee to pay prescribed fees. In any case where the department finds that an applicant or a licensee has failed to pay a prescribed fee required in this chapter, the department will not process any application and may suspend or revoke any license or approval involved or may issue an order with respect to licensed activities as the department determines to be

appropriate or necessary in order to carry out the provisions of this chapter and of the North Dakota Century Code.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 23-20.1-04

APPENDIX A
SCHEDULE OF FEES FOR RADIOACTIVE MATERIAL LICENSES

Applicants for radioactive material licenses and other regulatory services and holders of radioactive material licenses shall pay the following fees:

Category of material licenses	Type of fee	Fee
a. Licenses for possession and use of special nuclear material in sealed sources contained in devices used in industrial measuring systems.	Application-New license	110
	Renewal	110
	Amendment	40
b. All other special nuclear material licenses, except licenses authorizing special nuclear material in unsealed form in combination that would constitute a critical quantity.	Application-New license	460
	Renewal	460
	Amendment	110
c. Licenses for possession and use of source material in milling operations, except in in-situ leaching and heap-leaching operations.	Application	11,000
	New license	96,700
	Renewal	100,800
	Amendment:	
	Major-safety and environmental	20,800
	Minor-safety and environmental	3,500
	Administrative	150
d. Licenses for processing and recovery of source material in in-situ leaching operations or heap-leaching operations.	Production scale activity:	
	Application	7,000
	New license	59,500
	Research and development scale activity:	
	Application	2,000

	New license	21,800
	Renewal	17,300
	Amendment:	
	Major-safety and environmental	4,200
	Minor-safety and environmental	760
	Administrative	150
e. Licenses for refining uranium mill concentrates to uranium hexafluoride.	Application	11,000
	New license	96,700
	Renewal	45,800
	Amendment:	
	Major-safety and environmental	20,800
	Minor-safety and environmental	3,500
	Administrative	150
f. All other source material licenses.	Application-New license	140
	Renewal	70
	Amendment	40
g. Licenses for possession and use of radioactive material issued pursuant to chapter 33-10-03 for processing or manufacturing of items containing radioactive material for commercial distribution.	Application-New license	460
	Renewal	460
	Amendment	110
h. Licenses issued pursuant to chapter 33-10-03 authorizing the processing or manufacture and distribution of radiopharmaceuticals containing radioactive material.	Application-New license	190
	Renewal	150
	Amendment	40
i. Licenses for radioactive material issued pursuant to chapter 33-10-05 for industrial radiography operations peformed in shielded radiography installations or permanently designated areas at the addresses listed in the license.	Application-New license	190
	Renewal	150
	Amendment	40

j.	Licenses for radioactive material issued pursuant to chapter 33-10-03 for industrial radiography operations performed in shielded radiography installations and at multiple temporary locations at the addresses shown in the licenses or at temporary jobsites of the licensee in the field.	Application-New license Renewal Amendment	460 460 110
k.	Licenses for possession and use of radioactive material in sealed sources for irradiation of materials where the source is not removed from its shield (self-shielded units).	Application-New license Renewal Amendment	190 150 40
l.	Licenses for possession and use of radioactive material in sealed sources for irradiation of materials where the source is exposed for irradiation purposes.	Application-New license Renewal Amendment	460 460 110
m.	Licenses issued to distribute timepieces, hands, and dials containing hydrogen-3 or promethium-147 to persons exempt from the licensing requirements of chapter 33-10-03.	Application-New license Renewal Amendment	190 150 40
n.	Licenses for possession and use of radioactive material for research and development, except those licenses covered by categories g or h and licenses covered by categories s(2) or s(3) authorizing material research.	Application-New license Renewal Amendment	190 150 40
o.	All other specific radioactive material	Application-New license Renewal	110 110

licenses, except those in categories p(1) through t.	Amendment		40
p. Waste disposal:			
(1) Licenses specifically authorizing the receipt of waste radioactive material from other persons for the purpose of commercial disposal by land or sea burial by the licensee	Application		32,000
	New license		291,100
	Renewal		98,500
	Amendment:		
	Major-safety and environmental		197,700
	Minor-safety and environmental		690
	Administrative		150
(2) Licenses specifically authorizing the receipt of waste radioactive material from other persons for the purpose of packaging the material. The licensee will dispose of the material by transfer to another person authorized to receive or dispose of the material.	Application-New license		1,100
	Renewal		570
	Amendment:		
	Safety and environmental		570
	Administrative		150
(3) Licenses specifically authorizing the receipt of prepackaged waste radioactive material from other persons. The licensee will dispose of the material by transfer to another person authorized to receive or dispose of the material.	Application-New license		190
	Renewal		150
	Amendment		40
q. Well logging and well surveys and tracer studies:	Application-New license		460
	Renewal		460
	Amendment		110

	Licenses for possession and use of radioactive material for well logging, well surveys, and tracer studies.		
r.	Nuclear laundries: Licenses for commercial collection and laundry of items contaminated with radioactive material.	Application-New license Renewal Amendment	460 460 110
s.	Human use of radioactive material, source material, or special nuclear material:		
	(1) Licenses issued for human use of radioactive material in sealed sources contained in teletherapy devices.	Application-New license Renewal Amendment	300 270 40
	(2) Licenses issued to medical institutions, two or more physicians on a single license for human use of radioactive material except licenses in category s(1).	Application-New license Renewal Amendment	190 150 40
	(3) Licenses issued to an individual physician for human use of radioactive material, source material, or special nuclear material, except licenses in category s(1).	Application-New license Renewal Amendment	190 150 40
t.	Civil defense: Licenses for possession and use of radioactive material for civil defense activities.	Application-New license Renewal Amendment	190 150 40

History: Effective October 1, 1982.

APPENDIX B
SCHEDULE OF FEES FOR REGISTRATION CERTIFICATION

Applications for registration of radiation machines and other regulator services shall pay the following fees for each machine that they possess and use at their facilities. The fees cover a three-year registration period and the renewal fee is the amount listed.

Registration Category	Fee/Machine
Dentistry	30
Medical:	
A. Radiographic Machine	40
B. Fluoroscopic Machine	40
C. Combined Radiographic-Fluoroscopic	40
D. Therapeutic: Linear Accelerator	50
E. Superficial X-ray	30
Chiropractic	40
Podiatry	40
Veterinary Medicine	30
Industrial Radiography	40
Accelerators (Industrial and Research)	40
Education/Research	40

History: Effective October 1, 1982.

TITLE 43

Industrial Commission

NOVEMBER 1982

43-02-03-56. Underground disposal of water. The underground disposal of saltwater, brackish water, or other water unfit for domestic, livestock, irrigation, or other general use, shall be permitted only upon order of the commission, after notice and hearing.

General Authority: NDCC 38-08-04
Law Implemented: NDCC 38-08-04

Repealed effective November 1, 1982.

43-02-03-73. Permit for injection of gas, air, or water. Where correlative rights of all operators are protected and waste will not occur:

1. The injection of gas or air or water into any reservoir for the purpose of maintaining reservoir pressure or for secondary recovery operations shall be permitted only by order of the commission after notice and hearing. Orders approving the application will not be made within fifteen days of the filing of the application unless the written consent of all persons entitled to notice is filed with the commission within such time.

2. The application for all permits to inject gas, air, or water into any reservoir shall contain the following:

   a. A plat showing the location of the input well or wells, and the location of all oil and gas wells, including abandoned and drilling wells

and dry holes, and the names of operators and owners within one-half mile [.80 kilometer] of the input well or wells, and each offset operator.

b. The formations from which wells are producing or have produced.

c. The name, description, and depth of the formations to be affected by injection.

d. The log of the input well or wells or such information as is available.

e. A description of the input well's casing, or the proposed casing program, and proposed methods for testing casing before use of the input wells.

f. A statement as to whether gas, air, or water is to be used for injection, its source, and the estimated amounts to be injected daily.

g. The names and addresses of the operators of the project.

3. Such applications shall be approved, or not objected to, by all operators who are to participate in a proposed cooperative plan, or by the designated operator of a unitized project.

4. In addition to the notice to the commission required by law, notice of such application shall be given by the applicant by mailing or delivering a copy of the application to each operator in the pool. Such notice shall be mailed or delivered on or before the date the application is filed with the commission. An affidavit shall be attached to the application, showing the parties on whom the notice has been served and their addresses.

General Authority: NDCC 38-08-09
Law Implemented: NDCC 38-08-09

Repealed effective November 1, 1982.

43-02-03-74. Casing and cementing of injection wells. Wells used for injection of gas, air, or water into the producing formation shall be cased with safe and adequate casing or tubing so as to prevent leakage and such casing or tubing shall be so set or cemented that damage will not be caused

~~to oil, gas, or freshwater resources, in any case to conform to section 43-02-03-21.~~

General Authority: ~~NDCC 38-08-09~~
Law Implemented: ~~NDCC 38-08-09~~

Repealed effective November 1, 1982.

43-02-03-75. Notice of commencement and discontinuance of injection operations. ~~The following provisions shall apply to all injection projects:~~

~~1. Immediately upon the commencement of injection, the operator shall notify the commission of the injection date.~~

~~2. Within ten days after the discontinuance of injection operations, the operator shall notify the commission of the date of such discontinuance and the reason therefor.~~

~~3. Before any input well shall be plugged, notice shall be served on the commission by the owner of the well, and the same procedure shall be followed in the plugging of the well as provided for the plugging of oil and gas wells.~~

General Authority: ~~NDCC 38-08-09~~
Law Implemented: ~~NDCC 38-08-09~~

Repealed effective November 1, 1982.

43-02-03-76. Records. ~~The operator of an injection project shall keep accurate records and report monthly to the commission and the state geologist the amount of fluid produced, the volumes of fluid injected, and the injection pressures.~~

History: ~~Amended effective April 30, 1981.~~
General Authority: ~~NDCC 38-08-09~~
Law Implemented: ~~NDCC 38-08-09~~

Repealed effective November 1, 1982.

43-02-03-77. Application for unitized management under commission order. Any plan of unitized management or any injection into a reservoir for the purpose of maintaining reservoir pressure or

for enhanced recovery operations shall be permitted only by order of the commission after notice and hearing. The application for an order shall include a complete statement of all matters required by North Dakota Century Code section 38-08-09.3 and North Dakota Administrative Code chapter 43-02-05.

The application shall be submitted to the commission's staff, in duplicate, at least forty-five days prior to the date requested for such hearings and shall be accompanied by all engineering, geological, and other technical exhibits which will be introduced at the hearing.

~~In addition, the application shall set forth that all the provisions of North Dakota Century Code section 38-08-09.5 have been complied with.~~

History: Amended effective November 1, 1982.
General Authority: NDCC 38-08-09
Law Implemented: NDCC 38-08-09

STAFF COMMENT: Chapter 43-02-05 contains all new material but is not underscored so as to improve readability.

CHAPTER 43-02-05
UNDERGROUND INJECTION CONTROL

Section	
43-02-05-01	Definitions
43-02-05-02	Injection Into Underground Sources of Drinking Water Prohibited
43-02-05-03	Exempted Aquifers
43-02-05-04	Permit Requirements
43-02-05-05	Siting
43-02-05-06	Construction Requirements
43-02-05-07	Mechanical Integrity
43-02-05-08	Plugging and Abandoning Injection Wells
43-02-05-09	Operating Requirements
43-02-05-10	Corrective Action
43-02-05-11	Bonding Requirements
43-02-05-12	Reporting and Monitoring Requirements
43-02-05-13	Access to Records
43-02-05-14	Area Permits

43-02-05-01. Definitions. The terms used throughout this chapter have the same meaning as in North Dakota Century Code chapter 38-08 except:

1. "Area of review" means an area encompassing a fixed radius around the injection well, field or project of not less than one-quarter mile [402.34 meters].

2. "Underground injection" means the subsurface emplacement of fluids:

   a. Which are brought to the surface in connection with conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection.

   b. For enhanced recovery of oil or natural gas.

   c. For storage of hydrocarbons which are liquids at standard temperature and pressure.

3. "Underground source of drinking water" means an aquifer or any portion thereof which supplies drinking water for human consumption, or in which the ground water contains fewer than ten thousand mg/l total dissolved solids and which is not an exempted aquifer.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

43-02-05-02. Injection into underground source of drinking water prohibited. Underground injection that causes or allows movement of fluid into an underground source of drinking water is prohibited, unless the underground source of drinking water is an exempted aquifer as provided in section 43-02-05-03.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

43-02-05-03. Exempted aquifers. An aquifer or a portion thereof which meets the criteria for an underground source of drinking water may be determined by the commission, after notice and hearing, to be an exempted aquifer if it meets all of the following criteria:

1. It does not currently serve as a source of drinking water.

2. It cannot now and will not in the future serve as a source of drinking water because:

   a. It is mineral, hydrocarbon, or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for an underground injection permit to contain minerals or hydrocarbons that

considering their quantity and location are expected to be commercially producible;

b. It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical; or

c. It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption.

3. The total dissolved solids content of the ground water is more than three thousand and less than ten thousand mg/l and it is not reasonably expected to supply a public water system.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

43-02-05-04. Permit requirements.

1. No underground injection may be conducted without obtaining a permit from the industrial commission after notice and hearing. An application for a permit for underground injection shall be submitted to the commission at least thirty days prior to the hearing. The application shall be on forms provided by the commission and shall include at least the following information:

a. The name and address of the operator of the injection well.

b. A map showing the injection well for which a permit is sought and the applicable area of review. Within the area of review, the map should show the number, or name, and location of all producing wells, injection wells, abandoned wells, dry holes and water wells. The map should also show faults, if known or suspected.

c. A tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data should include a description of each well's type, construction, date drilled, location, depth, record of plugging or completion, and any additional information the commission may require.

d. Average and maximum daily rate and volume of fluids to be injected.

e. Average and maximum injection pressure.

f. Source, and appropriate analysis of injection fluid if other than produced water, and compatibility with the receiving formation.

g. Appropriate geological data on the injection zone and confining zones including lithologic description, geological name, thickness, and depth.

h. Geologic name, and depth to bottom of all underground sources of drinking water which may be affected by the injection.

i. Schematic drawings of the surface and subsurface construction details of the system.

j. Proposed injection program.

k. All available logging and testing data on the well.

l. The need for corrective action on wells penetrating the injection zone in the area of review.

m. The estimated fracture pressure of the confining zone.

n. Certification that all landowners within the area of review have been notified of the proposed injection well and that a hearing will be held.

2. Permits may contain such terms and conditions as the commission deems necessary.

3. Any permit issued under this section may be revoked by the commission after notice and hearing if the permittee fails to comply with the terms and conditions of the permit or any applicable rule or statute.

4. Before a permit for underground injection will be issued, the applicant must satisfy the commission that the proposed injection well will not endanger any underground source of drinking water.

5. No person shall commence construction of an underground injection well until the commission has issued a permit for the well.

6. Permits are transferable only with approval of the commission.

7. Permits may be modified by the commission.

8. Before a permit for underground injection will be issued, the applicant must complete any needed corrective action on wells penetrating the injection zone in the area of review.

9. All injection wells permitted before November 1, 1982, shall be deemed to have a permit for purposes of this section, however, all such prior permitted wells are subject to all other requirements of this chapter.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

43-02-05-05. Siting. All new injection wells shall be sited in such a fashion that they inject into a formation which has confining zones that are free of known open faults or fractures within the area of review.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

43-02-05-06. Construction requirements.

1. All injection wells shall be cased and cemented to prevent movement of fluids into or between underground sources of drinking water. The casing and cement used in construction of each new injection well shall be designed for the life expectancy of the well. In determining and specifying casing and cementing requirements, all of the following factors shall be considered:

   a. Depth to the injection zone.

   b. Depth to the bottom of all underground sources of drinking water.

   c. Estimated maximum and average injection pressures.

   d. Fluid pressure.

   e. Estimated fracture pressure.

   f. Physical and chemical characteristics of the injection zone.

2. Appropriate logs and other tests shall be conducted during the drilling and construction of injection wells. A descriptive report interpreting the results of these logs and tests shall be prepared by a qualified log analyst and submitted to the commission.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

43-02-05-07. Mechanical integrity.

1. Prior to commencing operations, the operator of a new injection well must demonstrate the mechanical integrity of the well. All existing injection wells must demonstrate mechanical integrity at least once every five years. An injection well has mechanical integrity if:

   a. There is no significant leak in the casing, tubing, or packer; and

   b. There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection bore.

2. One of the following methods must be used to evaluate the absence of significant leaks:

   a. Monitoring of annulus pressure.

   b. Pressure test with liquid or gas.

   c. Records of monitoring showing the absence of significant changes in the relationship between injection pressure and injection flow rate.

3. One of the following methods must be used to establish the absence of significant fluid movement:

   a. Well records demonstrating the presence of adequate cement to prevent such migration.

   b. The results of a temperature or noise log.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

43-02-05-08. Plugging and abandoning injection wells. Prior to abandoning an injection well, the well shall be plugged with cement in a manner which will not allow movement of fluids into an underground source of drinking water. The operator shall file a notice of intention to plug (form 4) with the oil and gas division of the industrial commission, and shall obtain the chief enforcement officer's approval of the plugging method prior to the commencement of plugging operations.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

43-02-05-09. Operating requirements. Injection pressure at the wellhead shall not exceed a maximum which shall be calculated so as to assure that the pressure in the injection zone during injection does not initiate new fracture or propagate existing fractures in the confining zone adjacent to the freshwater resource. In no case shall injection pressure initiate fractures in the confining zone or cause the movement of injection or formation fluids into an underground source of drinking water.

Injection between the outermost casing protecting underground sources of drinking water and the well bore is prohibited.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

43-02-05-10. Corrective action. If any monitoring indicates the movement of injection or formation fluids into underground sources of drinking water, the commission shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting as are necessary to prevent such movement.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

43-02-05-11. Bonding requirements. All injection wells must be bonded as provided in section 43-02-03-15.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

43-02-05-12. Reporting and monitoring requirements.

1. The operator of an injection well shall meter or use an approved method to keep records and shall report monthly to the industrial commission, oil and gas division, the volume and nature, i.e., produced water or makeup water, of the fluid injected, the injection pressure, and such other information as the commission may require. The operator shall retain all records required by the industrial commission for at least three years.

2. Immediately upon the commencement of injection, the operator shall notify the oil and gas division of the injection date.

3. Within ten days after the discontinuance of injection operations, the operator shall notify the oil and gas division of the date of such discontinuance and the reason therefor.

4. The operator of an injection well shall conduct such monitoring and sampling as the commission may require.

5. The operator of an injection well shall report any noncompliance with regulations or permit conditions to the enforcement officer orally within twenty-four hours followed by a written explanation within five days.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

43-02-05-13. Access to records. The industrial commission and the commission's authorized agents shall have access to all injection well records wherever located. All owners, drilling contractors, drillers, service companies, or other persons engaged in drilling, completing, operating, or servicing injection wells shall permit the industrial commission, or its authorized agents, to come upon any lease, property, well, or drilling rig operated or controlled by them, complying with all safety rules, and to inspect the records and operation of wells and to conduct sampling and testing. Any information so obtained shall be public information.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

43-02-05-14. Area permits.

1. The commission may issue a permit on an area basis, rather than for each well individually, provided that the permit is for injection wells:

   a. Described and identified by location in permit applications, if they are existing wells;

   b. Within the same well field, facility site, reservoir, project, or similar unit in the same state;

   c. Of similar construction;

   d. Of the same class; and

   e. Operated by a single owner or operator.

2. Area permits shall specify:

   a. The area within which underground injections are authorized; and

b. The requirements for construction, monitoring, reporting, operation, and abandonment for all wells authorized by the permit.

3. The area permit may authorize the permittee to construct and operate new injection wells within the permit area provided:

   a. The permittee notifies the enforcement officer when and where the new well has been or will be located.

   b. The additional well meets the area permit criteria.

   c. The cumulative effects of drilling and operation of additional injection wells are acceptable to the enforcement officer.

4. If the enforcement officer determines that any additional well does not meet the area permit requirements, the enforcement officer may modify or terminate the permit or take enforcement action.

5. If the enforcement officer determines the cumulative effects are unacceptable, the permit may be modified.

History: Effective November 1, 1982.
General Authority: NDCC 38-08-04(2)
Law Implemented: NDCC 38-08-04(2)

TITLE 50

Medical Examiners, Board of

NOVEMBER 1982

50-02-07-06. Annual registration - Good standing required. No application for annual registration shall be granted, nor shall the fee therefor be accepted, from a licensed physician whose license to practice medicine has been revoked or canceled by another state in which the physician has been practicing medicine, or whose license to practice in another state may be affected by pending disciplinary proceedings in another state, until the applicant appears personally before the board and demonstrates that annual registration is consistent with the public interest.

History: Effective November 1, 1982.
General Authority: NDCC 43-17-13
Law Implemented: NDCC 43-17-22

TITLE 62

Plumbing, Board of

NOVEMBER 1982

62-03-10-06. Water service.

1. Separation of water service and building sewer. Except as permitted below, the underground water service pipe and the building drain or building sewer shall be not less than ten feet [3.05 meters] apart horizontally and shall be separated by undisturbed or compacted earth.

   The water service pipe may be placed in the same trench with the building drain and building sewer provided approval is given by the administrative authority and the following conditions are met:

   a. The bottom of the water service pipe at all points shall be ~~at least twelve inches [30.48 centimeters]~~ level with or above the top of the sewerline at its highest point.

   b. The ~~water service pipe shall be placed on a solid shelf excavated at one side of the common trench~~ number of joints in the water service pipe shall be kept to a minimum.

   c. The ~~number of joints in the water service pipe shall be kept to a minimum~~ water service pipe material shall comply with subsection 1 of section 62-03-10-10 and conditions in subsection 1 of section 62-03-11-02 and section 62-03-02-16 shall also be met.

   d. The ~~materials and joints of sewer and water service pipe shall be installed in such manner and shall possess the necessary strength and durability to prevent the escape of solids, liquids, and gases therefrom under all known~~

~~adverse conditions such as corrosion, strains due to temperature changes, settlement, vibrations, and superimposed loads~~ building sewer shall be root proof and watertight and tested with a ten-foot head of water or equivalent.

~~e. The building sewer shall be root proof and watertight and tested with a ten foot head of water or equivalent.~~

2. Water service near sources of pollution. Potable water service pipes shall not be located in, under or above cesspools, septic tanks, septic tank drainage, fields, or seepage pits. A separation of ten feet [3.05 meters] shall be maintained. Where the water service must cross the sewerline, the bottom of the water service within ten feet [3.05 meters] of the point of crossing, shall be at least twelve inches [30.48 centimeters] above the top of the sewerline. The sewerline shall be of cast iron, Schedule 40 acrylonitrile-butadiene-styrene or polyvinyl chloride plastic pipe, at least ten feet [3.05 meters] on both sides of the crossing.

3. Stop and waste valves. Combination stop and waste valves or cocks may be installed in an underground water service pipe only ~~that comply with subsection 1~~ when not less than ten feet [3.05 meters] apart horizontally from the building sewer, and shall be separated by undisturbed or compacted earth.

4. Water service pipe through wall. Clearance shall be provided around a water service pipe passing through walls to protect it against (a) chemical action from direct contact with concrete, (b) distortion or rupture of water service pipe from shearing action due to settlement, (c) distortion or rupture of the water service pipe caused by expansion or contraction. Clearance shall be not less than one-half inch [12.7 millimeters] between the outside of the pipe and the wall. Sleeves or arches may be used to provide the wall opening. The space between the pipe and wall structure shall be carefully packed or caulked with lead or waterproof and vermin and rodent resistant material.

History: Amended effective November 1, 1982.
General Authority: NDCC 43-18-09
Law Implemented: NDCC 43-18-09

TITLE 63

Podiatry, Board of Registry in

OCTOBER 1982

STAFF COMMENT: Title 63 contains all new material but is not underscored so as to improve readability.

ARTICLE 63-01

GENERAL ADMINISTRATION

Chapter
63-01-01 Organization of Board
63-01-02 Duties of Officers
63-01-03 Inquiries and Communications
63-01-04 Procedure of Board

CHAPTER 63-01-01
ORGANIZATION OF BOARD

Section
63-01-01-01 Organization and Function of Board of Registry in Podiatry

63-01-01-01. Organization and function of board of registry in podiatry.

1. HISTORY. In 1929 the legislative assembly enacted the Podiatry Practice Act, which is codified as North Dakota Century Code chapter 43-05. The chapter provides for a board of registry in podiatry.

2. FUNCTION. The function and responsibility of the board is to examine and license qualified applicants for licensure, ensure the continuing qualifications and general educational background of podiatry practitioners, and perform such other duties as may be required by general statute.

3. BOARD MEMBERSHIP. The board consists of four members appointed by the governor. Three of the members are doctors of podiatric medicine. One member is a doctor of medicine. The board members annually elect from the board membership the president, vice president, and secretary-treasurer. Members of the board serve four-year terms arranged so that one term expires each year.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02.1

CHAPTER 63-01-02
DUTIES OF OFFICERS

Section
63-01-02-01 Duties of President
63-01-02-02 Duties of Vice President
63-01-02-03 Duties of Secretary-Treasurer
63-01-02-04 Other Duties

63-01-02-01. Duties of president. The president of the board shall serve as the presiding officer at all meetings or hearings held by the board. The president shall call meetings; approve and keep in custody the bond of the secretary-treasurer; sign all licenses; approve all expenditures of funds during the intervals between board meetings; sign the minutes of each meeting when they are approved; assign subjects to board members for use in examination of candidates; supervise all examinations given by the board; and carry out all other duties that may pertain to the president's office.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 28-32-02.1, 43-05-04

63-01-02-02. Duties of vice president. The vice president shall assume all duties of the president in the event of the president's inability to perform the duties of the office because of absence or ill health. The vice president shall assume the office of president should that office be vacated. Further, the vice president shall perform any other duty assigned by the president.

History: Effective October 1, 1982.

General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 28-32-02.1, 43-05-08

63-01-02-03. Duties of secretary-treasurer. The secretary-treasurer shall be in charge of the books, records, property, and money of the board. The secretary-treasurer shall conduct the board's correspondence, keep a complete and accurate record of the business transactions at all meetings, and of all fees received and expenses paid under the rules, and shall report the same to the board annually. The secretary-treasurer shall also:

1. Keep a complete record listing of the names and addresses of all persons to whom licenses have been granted with the number and date of issue of each license.

2. Collect fees and renewals, giving a receipt therefor, and deposit to the account of the North Dakota state board of registry in podiatry all money received not later than the first day of the calendar month following the receipt of the money.

3. Receive and submit to the board for approval all applications for licenses.

4. Notify the members of the board of the dates and places of all regular and special meetings of the board.

5. Provide notice to all practitioners and the public of regular and special meetings as may be required by law or by this title.

6. Notify applicants for licensure of the dates and places of examination.

7. Keep a confidential file of all forfeited, revoked, or suspended licenses and the reasons for the board action with respect to these licenses. Such information will be kept confidential, but may be released to any other state board inquiring about a candidate for licensure in that state, or as required by state law or as in the discretion of the board.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 28-32-02.1, 43-05-07

63-01-02-04. Other duties. The officers and members of the board shall perform such other duties as are required by law.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-02

CHAPTER 63-01-03
INQUIRIES AND COMMUNICATIONS

Section
63-01-03-01 Inquiries and Communications

63-01-03-01. Inquiries and communications. Any inquiries, communications, or complaints concerning the board of registry in podiatry should be sent to:

Aaron Olson, D.P.M.
President, North Dakota Podiatry Examiners
Medical Arts Building
810 East Rosser
Bismarck, North Dakota 58501

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02.1

CHAPTER 63-01-04
PROCEDURE OF BOARD

Section
63-01-04-01 Procedure of Board

63-01-04-01. Procedure of board. North Dakota Century Code chapter 28-32 is adopted as the rules of procedure of the board of registry in podiatry and is controlling except as otherwise required by statute or provided in this title.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02.2

ARTICLE 63-02

LICENSURE

Chapter
63-02-01 Application
63-02-02 Examination
63-02-03 License
63-02-04 Temporary License
63-02-05 License by Reciprocity
63-02-06 Honorary License

63-02-07 Reinstatement of License
63-02-08 Fees

CHAPTER 63-02-01
APPLICATION

Section
63-02-01-01 Application Requirements
63-02-01-02 Recognized School
63-02-01-03 Application Refunds

63-02-01-01. Application requirements. Every person applying for a regular license to practice podiatry shall submit the following materials not later than thirty days preceding the date of the examination:

1. A completed application form provided by the board.
2. A certified copy of a diploma from an approved podiatry college, or its equivalent as determined by the board, granted to the applicant by such school.
3. A certified transcript from the podiatry school.
4. Three reference letters regarding the character of the applicant; no more than two from teachers or doctors of podiatry, and none from relatives.
5. An unmounted photograph of approximately three by four inches [7.62 by 10.16 centimeters] of the applicant, taken within one hundred twenty days of the date of the application, and signed across the front by the applicant.
6. An application fee.

History: Amended effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-10, 43-05-11

63-02-01-02. Recognized school. A recognized school of podiatry means one accredited by the council on education of the American podiatry association. The board, however, reserves the right to add to or take from the accredited list of American schools of podiatry by a majority vote of the board. Foreign schools not approved by the council on education of the American podiatry association shall be evaluated from curriculum, catalogs, professors, and other data furnished by the applicant to the board, and translated into English, and such

translations certified to the board by the United States counsel or other qualified persons approved by the board.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-10, 43-05-11

63-02-01-03. Application refunds. Applicants who are found to be unqualified for examination by the board will receive a refund of one-half of the examination fee. An applicant who fails to take an examination will receive a refund of one-half of the examination fee if the applicant provides written notice at least ten days in advance that the applicant is unable to take the examination; or if the applicant who fails to provide written notice later submits a written explanation satisfactory to the board that the applicant's failure to take the examination resulted from extreme personal hardship.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-10, 43-05-11

CHAPTER 63-02-02
EXAMINATION

Section
63-02-02-01 Examination Contents
63-02-02-02 Written Examination
63-02-02-03 Oral-Practical Examination

63-02-02-01. Examination contents. Examinations shall have two parts: written and oral-practical. The written and oral-practical examinations are scored separately and an applicant must achieve a passing grade of seventy-five percent on each examination to become qualified for license.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-12

63-02-02-02. Written examination. The board utilizes the examination given by the national board of podiatry examiners as its written examination, and requires a cumulative score of seventy-five percent or better in part one and part two, recorded by the national board of podiatry examiners as a passing score. An applicant is responsible for arranging one's own examination with the national board of podiatry examiners, and with providing a verified copy of the score to the board.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-12

63-02-02-03. Oral-practical examination. All oral-practical examinations will be conducted by the board annually in the months of May through July unless otherwise provided.

1. Every applicant who has demonstrated passage of the written portion of the examination will be eligible to take the oral-practical examination.

2. The board will notify each applicant found eligible to take the oral-practical examination of the time and place scheduled for that applicant's oral-practical examination not less than thirty days in advance.

3. The subjects covered on the practical portion of the examination are diagnosis, surgery, biomechanics, emergencies, patient care, ethics, and theory in practice.

4. Failure of an applicant to appear for examination as scheduled will void the application, and will require the applicant to reapply for licensure, unless prior scheduling arrangements have been made with the board.

5. An applicant failing the oral-practical exam may be reexamined at the next regularly scheduled exam period for an additional reapplication fee, if the applicant completes an application within one year.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-13

CHAPTER 63-02-03
LICENSE

Section
63-02-03-01 License Issuance
63-02-03-02 License Display
63-02-03-03 Notification of Address

63-02-03-01. License issuance. Every applicant who passes the board examination or whose reciprocity has been accepted by the board shall be issued an official license to practice podiatry in North Dakota.

History: Effective October 1, 1982.

General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-09

63-02-03-02. License display. Every practitioner to whom a license has been issued shall keep the license conspicuously in one's office or place of business, and shall whenever required exhibit the license to any member or representative of the board. If a licensee has more than one office or place of business, official copies of the current license must be prominently displayed in each office.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-09

63-02-03-03. Notification of address. Every licensed practitioner must notify the board's secretary-treasurer of one's business address within thirty days of opening one's first office, all other offices, or moving of offices.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-09

CHAPTER 63-02-04
TEMPORARY LICENSE

Section
63-02-04-01 Temporary License

63-02-04-01. Temporary license. A practitioner holding a valid license to practice podiatry issued from another licensing jurisdiction of the United States may apply to the board for a temporary license to practice podiatry in North Dakota. The applicant shall submit all materials required for a regular license. The application and documentary evidence submitted by the applicant shall be reviewed by the officers, and upon their finding that the applicant is qualified, the board may issue a temporary license to practice podiatry in North Dakota to the applicant until the next regular examination date. If the applicant is unable to take the exam for reason of illness or personal hardship, the applicant must reapply for a temporary license and must again pay the application fee.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-08

CHAPTER 63-02-05

LICENSE BY RECIPROCITY

Section
63-02-05-01 License by Reciprocity

63-02-05-01. License by reciprocity. All applications for license by reciprocal agreement must be made on the official form supplied by the board and must be filed with the secretary-treasurer of the board. The application must be accompanied by the required fee as well as other documents required for a standard application for licensure. An applicant must also submit a photocopy of the license upon which reciprocity is based and a statement from that licensure board verifying that the applicant has a valid license, is in good standing with that board, and has engaged in the practice of podiatry for the two immediately preceding years. Reciprocity can be granted only with those states honoring reciprocity with North Dakota.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-14

CHAPTER 63-02-06
HONORARY LICENSE

Section
63-02-06-01 Honorary License

63-02-06-01. Honorary license. An honorary license may be granted to those individuals having demonstrated special services for podiatrists and the public of North Dakota. An honorary license does not confer the right or privilege to practice podiatric medicine in North Dakota.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-08

CHAPTER 63-02-07
REINSTATEMENT OF LICENSE

Section
63-02-07-01 Reinstatement of License

63-02-07-01. Reinstatement of license. Any practitioner whose license to practice podiatry has been properly revoked, suspended, or

placed on probation by the board may apply for reinstatement after the time set forth in the disciplinary ruling. The application must be in writing, must set forth why the license should be reinstated, and must be accompanied by the appropriate fee. At its first regular meeting after receiving the application for reinstatement, the board shall make an inquiry, and shall render a decision with reference to any application for reinstatement, in accordance with North Dakota Century Code chapter 43-05 and this title.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-08

CHAPTER 63-02-08
FEES

Section
63-02-08-01 Fees

63-02-08-01. Fees. All remittances must be made payable to the North Dakota board of registry in podiatry. The types of fee and amounts are:

1.	Application fee	$150
2.	Application fee based on reciprocity	150
3.	Temporary license	150
4.	Delinquent renewal	150
5.	Reinstatement	150
6.	Annual renewal:	
	a. 1 to 5 years of practice	50
	b. 5 to 10 years of practice	100
	c. Over 10 years of practice	150
	d. Out-of-state practitioner shall pay one-half of the corresponding fees above	
7.	Temporary license	150
8.	Reexamination	10
9.	Duplicate license	10

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-08, 43-05-10, 43-05-13, 43-05-14

ARTICLE 63-03

LICENSE RENEWAL

Chapter
63-03-01 General Administration
63-03-02 Continuing Education
63-03-03 Delinquency in Renewal

CHAPTER 63-03-01
GENERAL ADMINISTRATION

Section
63-03-01-01 General Administration

63-03-01-01. General administration. Each licensed practitioner shall annually register with the board. On or before December first of each year, the board shall mail to each licenseholder, at the holder's last known address as it appears in the records of the board, an application form on which to apply for renewal of the license. Each practitioner shall complete the application form and return it, together with the required fee, to the office of the board prior to the next succeeding January first. Upon receipt of the renewal application and fee, the board shall provide each practitioner with a renewal license specifying the period of time covered.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-15

CHAPTER 63-03-02
CONTINUING EDUCATION

Section
63-03-02-01 Continuing Education Requirements
63-03-02-02 First-Year Licensure Satisfies Requirement
63-03-02-03 Satisfactory Evidence of Course Attendance
63-03-02-04 Self-Study
63-03-02-05 Waiver

63-03-02-01. Continuing education requirements. A licensed podiatrist shall at the time of submitting the annual renewal application and as a condition of renewal submit to the board satisfactory evidence of having completed a minimum of twenty hours of study in the continuing education courses approved by the North Dakota board of registry in podiatry and completed during the twelve months preceding reregistration.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-10

63-03-02-02. First-year licensure satisfies requirement. Passing the licensure examination completes the continuing education requirement for that license year.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-08

63-03-02-03. Satisfactory evidence of course attendance. Satisfactory evidence of attendance must be attached to the statement demonstrating sufficient continuing education. The evidence must consist of a copy of a certification of attendance including the dates, title, and sponsors of the course. However, the board in its discretion may accept a letter from the applicant listing the above information if a certificate is not available.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-08

63-03-02-04. Self-study. A licensed podiatrist may receive a maximum of eight credits of continuing education annually through self-study, including television viewing, video or sound recorded programs, correspondence work, research, preparation and publication of scholarly works, or by other similar methods. However, practitioners using these methods must receive prior approval of the board by means of a letter specifying the education methods and assurances they are of value to the applicant.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-08

63-03-02-05. Waiver. The continuing education requirement may be waived by the board acting on an application for waiver by the

practitioner, satisfactorily explaining the practitioner's basis for seeking such a waiver.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-10

CHAPTER 63-03-03
DELINQUENCY IN RENEWAL

Section
63-03-03-01 Issuance of Show Cause Order
63-03-03-02 Show Cause Hearing
63-03-03-03 Revocation
63-03-03-04 Reinstatement

63-03-03-01. Issuance of show cause order. If the license renewal is not completed on or before May first of any given year, the board shall send the practitioner an order to show cause why the license should not be revoked. The show cause order shall specifically advise the respondent of the violation and of the time and place of the hearing on the order.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-08, 43-05-15.

63-03-03-02. Show cause hearing. The hearing shall be held in compliance with North Dakota Century Code chapter 28-32.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 28-32-02.1

63-03-03-03. Revocation. If, after the hearing, the board decides the delinquent practitioner has not shown "good cause" the practitioner's license shall be revoked.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-08, 43-05-15

63-03-03-04. Reinstatement. Any practitioner whose license has been revoked for delinquency in renewal must reapply for licensure and must submit the regular application fee and a delinquency fee and must pay the costs of the show cause hearing.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-08, 43-05-15

ARTICLE 63-04

DISCIPLINARY ACTION

Chapter
63-04-01 General Administration

CHAPTER 63-04-01
GENERAL ADMINISTRATION

Section
63-04-01-01 Complaint
63-04-01-02 Preliminary Investigation
63-04-01-03 Administrative Hearing

63-04-01-01. Complaint. Any person, public officer, association, or the board may register a complaint against a licensed podiatrist. The complaint must be in writing and must be submitted to the board.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-08

63-04-01-02. Preliminary investigation. All complaints alleging or implying violations of North Dakota Century Code chapter 43-05 or this title shall be referred to the board's counsel with instructions to investigate.

1. Upon the initial investigation the board's counsel will recommend to the board what action, if any, the board shall take.

2. Complaints involving minor or routine issues may at the discretion of the board be assigned to a member of the board. Typically, such assignment will be a written inquiry, explanation, or warning to the person or persons accused, with copies of all correspondence to the other members.

3. The board may hold a preliminary hearing to determine whether a formal administrative hearing is necessary.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-08

63-04-01-03. Administrative hearing. If the board decides that the complaint requires a formal administrative hearing, the hearing shall be in accordance with North Dakota Century Code chapter 28-32.

1. Upon the conclusion of the hearing the board shall make findings of fact and conclusions of law and accordingly may revoke the license of the accused, or suspend the license for a fixed period, or reprimand, or take such other disciplinary action, or dismiss the charges.

2. An order of suspension made by the board may contain such provisions as to reinstatement of the license as the board shall direct.

3. The board upon good cause may direct a rehearing.

4. Any appeal may be taken in the manner provided in North Dakota Century Code chapter 28-32.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 43-05-08
Law Implemented: NDCC 43-05-08

TITLE 69

Public Service Commission

SEPTEMBER 1982

AGENCY SYNOPSIS: In 1980 Congress passed what is termed the "Staggers Rail Act". Among the provisions of that Act was a section requiring the states to obtain certification from the Interstate Commerce Commission (ICC) if they wanted to continue to exercise jurisdiction over the regulation of intrastate rail rates. To obtain such certification the states are required to prove to the ICC that they will exercise their intrastate rate regulation in accordance with federal standards and procedures rather than with state laws and rules.

The ICC initially indicated to the PSC that it would be able to obtain certification by simply showing that it had legislative authority to regulate pursuant to federal standards rather than state law. Accordingly, the commission sought and the 1981 legislature approved the following additional language to North Dakota Century Code section 49-10.1-01:

> "The commission shall exercise its jurisdiction over intrastate rail rates consistent with federal law so as to obtain certification of such jurisdiction from the federal government. All provisions of the North Dakota Century Code inconsistent with federal requirements for certification of intrastate rail jurisdiction shall be deemed inapplicable to the regulation of intrastate rail rates..."

The PSC along with the commissions from other states sought certification from the ICC citing the statutory authority to regulate in accordance with federal standards and procedures. The ICC has since rejected those filings and has stated, in effect, that the states must have rules or statutes in place which recite the same standards and procedures as are in place at the federal level. The states must file revised applications for certification by August 9, 1982, showing that these standards are or will be in place or they will lose their authority to regulate intrastate rail rates. During the interim the states are conditionally certified.

The proposed rules presently sponsored by the PSC are nearly a recitation of the major federal standards and procedures regarding regulation of railroad rates. The only real modifications to the federal language was to reference intrastate application. In addition, two catch-all provisions are set forth in sections 69-04-03-23 and 69-04-03-24.

The commission recognizes that in respect to the level of intrastate rail traffic in North Dakota, the proposed rules appear both lengthy and complicated. We believe, however, that it is unlikely the ICC would approve certification if any less detailed rules were in place. Adoption of the federal standards and procedures through a near verbatim recitation as proposed by these rules appears to be the most efficient means of obtaining intrastate certification.

69-02-04-01. Notice. In those proceedings in which a hearing is to be held, the commission will, by order or otherwise, assign a time and place for hearing. Notice of the hearing will be posted in the office of the commission, and will be served upon the parties and such other persons that may be entitled to receive notice at least twenty days prior to the date set for the hearing except in cases of emergency.

In any proceeding involving the rights of persons who are members of the public generally, notice of hearing shall be given by mailing a copy of the notice to the chairman of the board of county commissioners in each county wherein its citizens who are or will be affected reside, and to the chief executive officer of each city affected in the county. In addition, the commission will serve notice of the hearing by publication thereof to be printed in the official newspaper of each county or counties in which the subject matter involved is located. Notice of publication shall be at least twenty days prior to the date of the hearing.

~~Railroads at the time of filing general increases with the public service commission shall prepare press releases in the same format as prescribed by the interstate commerce commission at 49 CFR 1102.1 (a) et seq., and send the releases on the major news wire services and the principal newspapers of general circulation in the following counties: Burleigh, Cass, Grand Forks, Stark, Ward, and Williams.~~

Middlewest motor freight bureau and national bus traffic association shall, when filing general increases in rates, fares, or charges with the public service commission, prepare news releases indicating the amount of the increase (both in terms of percentage and dollars annualized), the geographic scope of the increase and any general exceptions to the increase. The press releases shall be sent to the editors of the newspapers of general circulation in the following counties: Burleigh, Cass, Grand Forks, Stark, Ward, and Williams.

When determined by the commission to be appropriate, the gas or telephone utility proposing a change in rates shall notify individually

its subscribers of the proposed change by billing stuffer or other appropriate method approved by the commission. If a hearing has been ordered by the commission, the notice shall indicate the place and date of the commencement of the hearing and that the public is invited to attend. Subject to the power of the commission to modify its contents, the notice shall include a summary sheet describing the absolute dollar and percentage impact of the proposed rate changes upon revenues by the various classes of services offered by the petitioning utility and shall include a list of petitioner's business office locations where the proposed rate schedules and a comparison of present and proposed rates can be examined by the public. The notice shall also contain in bold type the following statement: The rate changes described in this notice have been requested by (specific utility).

History: Amended effective October 1, 1980; amended effective September 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 49-01-07

STAFF COMMENT: Chapter 69-04-03 contains all new material but is not underscored so as to improve readability.

CHAPTER 69-04-03
RAIL CARRIER RATES

Section	
69-04-03-01	Standards for Rail Carrier Rates
69-04-03-02	Burden of Proof
69-04-03-03	Minimum Rates
69-04-03-04	Rate Prescription
69-04-03-05	Investigation and Suspension
69-04-03-06	Rate Flexibility Zone
69-04-03-07	Market Dominance
69-04-03-08	Base Rates
69-04-03-09	Contract Rates
69-04-03-10	Common Carrier Obligation
69-04-03-11	Discrimination
69-04-03-12	Separate Rates for Distinct Services
69-04-03-13	Business Entertainment Expenses
69-04-03-14	Tariff Required
69-04-03-15	Exemption of Rail Transportation
69-04-03-16	Rates and Liability Based on Value
69-04-03-17	Rates for Recyclable Materials
69-04-03-18	Through Routes and Joint Rates
69-04-03-19	Through Routes and Joint Rates Prescribed by the Commission
69-04-03-20	Joint Rate Surcharges and Cancellations
69-04-03-21	General and Inflation Increases and Fuel Surcharges
69-04-03-22	General Tariff Requirements
69-04-03-23	National Transportation Policy
69-04-03-24	Rail Rate Proceedings

69-04-03-01. Standards for rail carrier rates.

1. Except as provided in subsections 2 and 3 and unless a rate would be prohibited by title 49 of the United States Code for transportation performed in interstate commerce, a rail carrier may establish any rate for transportation or other service provided by the carrier.

2. If the commission determines, under section 69-04-03-07, that a rail carrier has market dominance over the transportation to which a particular rate applies, the rate established by the carrier for the transportation must be reasonable. In determining if a rate is reasonable, the commission will recognize the policy of 49 U.S.C. 10101a that rail carriers shall earn adequate revenues as established by the interstate commerce commission under 49 U.S.C. 10704.

3. A rate for transportation or other service provided by a rail carrier may not be established below a reasonable minimum. Any rate for transportation by a rail carrier that does not contribute to the going concern value of the carrier is presumed to be below a reasonable minimum. A rate that contributes to the going concern value of the carrier is conclusively presumed not to be below a reasonable minimum.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-02. Burden of proof. In any proceeding to determine the reasonableness of a rate under subsection 2 of section 69-04-03-01:

1. The shipper challenging the rate shall have the burden of proving that the rate is not reasonable if:

   a. The rate is authorized under section 69-04-03-06, and results in a revenue-variable cost percentage for the transportation to which the rate applies that is less than the lesser of the percentages described in paragraph 1 of subdivision c of subsection 5 of section 69-04-03-06; or

   b. The rate does not meet the description set forth in subdivision a of this subsection, but the commission does not begin an investigation proceeding under section 69-04-03-05 to determine if the rate is reasonable.

2. The rail carrier establishing the challenged rate shall have the burden of proving that the rate is reasonable if:

   a. The rate is greater than that authorized under section 69-04-03-06, or results in a revenue-variable cost percentage for the transportation to which the rate applies that is equal to or greater than the lesser of the percentages described in paragraph 1 of subdivision c of section 69-04-03-06; and

   b. The commission begins an investigation proceeding under section 69-04-03-05 to determine if such rate is reasonable.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-03. Minimum rates.

1. A rate for transportation by a rail carrier that equals or exceeds the variable cost of providing the transportation is

conclusively presumed to contribute to the going concern value of such rail carrier.

2. Upon the filing of a complaint alleging that a rate is below a reasonable minimum, the commission will take final action on the complaint by the ninetieth day after the date the complaint is filed.

3. If the commission determines, based on the record after opportunity for a hearing, that a rate is below a reasonable minimum, the commission will order the rate to be raised but only to the minimum level required by section 69-04-03-01. The complainant shall have the burden of proving that the rate is below a reasonable minimum.

4. For purposes of this section, variable costs will be determined under formulas or procedures prescribed or certified by the interstate commerce commission.

5. In the determination of variable costs for purposes of minimum rate regulation, the commission will, on application of the rail carrier proposing the rate, determine only the costs of the carrier and only those costs of the specific service in question unless the specific information is not available. The commission will not include in the variable costs an expense that does not vary directly with the level of transportation provided under the proposed rate.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-04. Rate prescription.

1. When the commission, after a full hearing, decides that a rate charged or collected by a rail carrier for transportation, or that a classification, rule, or practice of that carrier, would violate subtitle IV of title 49 of the United States Code for transportation performed in interstate commerce, the commission may prescribe the rate (including a maximum or minimum rate or both), classification, rule, or practice to be followed. The commission may order the carrier to stop the violation. When a rate, classification, rule, or practice is prescribed under this subsection, the affected carrier may not publish, charge, or collect a different rate and shall adopt the classification and observe the rule or practice prescribed by the commission.

2. The commission will make an adequate and continuing effort to assist rail carriers in attaining revenue levels prescribed by the interstate commerce commission that are adequate, under honest, economical, and efficient management, to cover total

operating expenses, including depreciation and obsolescence, plus a reasonable and economic profit or return (or both) on capital employed in the business. However, a rate, classification, rule, or practice of a rail carrier may be maintained at a particular level to protect the traffic of another carrier or mode of transportation only if the commission finds that the rate or classification, or rule or practice related to it, reduces or would reduce the going concern value of the carrier charging the rate.

3. In a proceeding involving a proposed increase or decrease in rail carrier rates, the commission will specifically consider allegations that the increase or decrease would change the rate relationships between commodities, ports, places, regions, areas, or other particular descriptions of traffic; and have a significant adverse effect on the competitive position of shippers or consignees served by the rail carrier proposing the increase or decrease. The commission will investigate to determine if the change or effect would violate subtitle IV of title 49 of the United States Code for transportation performed in interstate commerce when it finds that those allegations are substantially supported on the record. The investigation may be made either before or after the proposed increase or decrease becomes effective and either in that proceeding or in another proceeding.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-05. Investigation and suspension.

1. When a new individual or joint rate or individual or joint classification, rule, or practice related to a rate is filed with the commission by a rail carrier, the commission may begin a proceeding to determine if the proposed rate, classification, rule, or practice would violate subtitle IV of title 49 of the United States Code for transportation performed in interstate commerce. The commission will give reasonable notice to interested parties before beginning a proceeding under this subsection but may act without allowing an interested party to file an answer or other formal pleading in response to its decision to begin the proceeding.

2. If the commission does not complete a proceeding under this section and make its final decision by the end of the fifth month after the rate, classification, rule, or practice was to become effective, the rate, classification, rule, or practice is effective at the end of that time period, or if already in effect at the end of that time period, remains in effect; except that if a rail carrier files a change in a rate, or a change in a classification, rule, or practice that has the

effect of changing a rate, that adjusts the rate to the rate charged on similar traffic in interstate or foreign commerce, and the commission does not act finally on the change by the one hundred twentieth day after it was filed, the interstate commerce commission will have exclusive jurisdiction to prescribe a rate for the transportation affected by the change.

3. If an interested party has filed a complaint under subsection 1, the commission may set aside a rate, classification, rule, or practice that has become effective under this section if the commission finds it would be in violation of chapter 107 of title 49 of the United States Code for transportation performed in interstate commerce.

4. a. The commission will not suspend a proposed rate, classification, rule, or practice during the course of a commission proceeding under this section unless it appears from the specific facts shown by the verified statement of a person that:

   (1) It is substantially likely that the protestant will prevail on the merits;

   (2) Without suspension, the proposed rate change will cause substantial injury to the protestant or the party represented by the protestant; and

   (3) Because of the peculiar economic circumstances of the protestant, the provisions of subsection 5 do not protect the protestant.

   b. The burden shall be on the protestant to prove the matters described in subdivision a.

5. If the commission does not suspend a proposed rate increase under subsection 4, the rail carrier shall account for all amounts received under the increase until the commission completes its proceedings under subsection 2. The accounting shall specify by whom and for whom the amounts are paid. When the commission takes final action, the carrier shall refund to the person for whom the amounts were paid that part of the increased rate found to be unreasonable, plus interest at a rate equal to the average yield (on the date the statement is filed) of marketable securities of the United States government having a duration of ninety days.

6. If a rate is suspended under subsection 4 and any portion of such rate is later found to be reasonable under this chapter the carrier shall collect from each person using the transportation to which the rate applies the difference between the original rate and the portion of the suspended rate found to be reasonable for any services performed during

the period of suspension, plus interest at a rate equal to the average yield (on the date the statement is filed) of marketable securities of the United States government having a duration of ninety days.

7. If any portion of a proposed rate decrease is suspended under subsection 4 and later found to be reasonable under this chapter the rail carrier may refund any part of the portion of the decrease found to comply with this chapter if the carrier makes the refund available to each shipper who participated in the rate, in accordance with the relative amount of such shipper's traffic transported at such rate.

8. a. Notwithstanding the provisions of sections 69-04-03-11 and 69-04-03-14, a rail carrier may waive the collection of amounts due under subsection 6 of this section if the amounts are not significant.

   b. If a rail carrier wishes to waive collection of amounts due under subsection 6, which are more than two thousand dollars, a petition for appropriate authority should be filed by the carrier by submitting a Petition to Waive Insignificant Amounts. These petitions should contain the following information:

      (1) The name and address of the customer for whom the carrier wishes to waive collection.

      (2) The name and addresses of the carriers involved in the intended waiver and a statement certifying that all carriers concur in the action.

      (3) The amount intended to be waived.

      (4) The number of the investigation and suspension case involved, the beginning and ending dates of the suspension period, and any other pertinent tariff information.

      (5) The points of origin and destination of the shipments and the routes of movement, if relevant.

   c. If a rail carrier wishes to waive collection of amounts due under subsection 6 which are two thousand dollars or less, no petition need be filed prior to waiver, provided that this exemption may be invoked by a carrier only once for any person who uses the suspended rate during the suspension period. A Letter of Disposition informing the commission of the action taken, the date of the action, and the amount waived shall be submitted to the commission within thirty days of the waiver.

d. Any interested person may protest the granting of a Petition to Waive Insignificant Amounts by filing a letter of objection within thirty days of commission receipt of the petition. Letters of objection shall clearly state the reasons for the objection, and shall certify that a copy of the letter of objection has been served on all parties named in the petition. A period of fifteen days will be allowed for reply.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-06. Rate flexibility zone.

1. In this section:

   a. "Adjusted base rate" means the base rate for the transportation of a particular commodity multiplied by the latest rail cost adjustment factor published by the interstate commerce commission pursuant to 49 U.S.C. 10707a(a)(2).

   b. "Base rate" means, with respect to the transportation of a particular commodity:

      (1) For the twenty-four-month period beginning on October 1, 1980, the rate in effect on October 1, 1980;

      (2) For the twenty-four-month period beginning on October 1, 1982, the rate in effect on October 1, 1982; and

      (3) For the five-year period beginning on October 1, 1984, and for each subsequent five-year period, the rate in effect on the first day of the applicable five-year period.

      If no rate exists for the transportation of a particular commodity on October 1, 1980, the base rate for the transportation of such commodity shall be the rate established by the rail carrier (divided by the latest rail cost adjustment factor published by the interstate commerce commission), unless such rate is found to be unreasonable by the commission, in which case the base rate shall be the rate authorized by the commission (divided by the latest rail cost adjustment factor published by the interstate commerce commission).

2. a. Except as provided in subdivision b, a rail carrier may increase any rate for transportation over which the

carrier has market dominance under section 69-04-03-07, so long as the increased rate is not greater than the adjusted base rate for the transportation involved, plus any rate increases implemented under subsection 3 or 4 of this section.

b. A rate increase authorized under this subsection will not be found to exceed a reasonable maximum for the transportation involved.

c. A rail carrier may not increase a rate under this subsection to the extent that the cost increases to the carrier due to inflation are recovered through general rate increases pursuant to 49 U.S.C. 10706, or inflation-based rate increases under 49 U.S.C. 10712 applicable to that rate.

3. a. During the twelve-month period beginning October 1, 1980, and during each of the three succeeding twelve-month periods, a rail carrier may, in addition to rate increases authorized under subsection 2, increase any rate over which the rail carrier has market dominance under section 69-04-03-03, by an annual amount of not more than six percent of the adjusted base rate, except that in no event shall the total increase under the subsection result in a rate which is more than one hundred eighteen percent of the adjusted base rate.

b. (1) If any portion of a rate increase under this subsection is not implemented in the year in which it is authorized, such portion may, except as provided in paragraph 2, be implemented only in the next succeeding year.

(2) If any portion of the total rate increase authorized under this subsection is not implemented by September 30, 1984, such portion may be implemented in the next two succeeding years, except that in no event may a rail carrier increase a rate under this subsection or under subsection 4 in either of such two succeeding years by an annual amount of more than ten percent of the adjusted base rate.

4. a. Except as provided in subdivision c, during the twelve-month period beginning on October 1, 1984, and during each succeeding twelve-month period, a rail carrier may, in addition to rate increases under subsection 2, increase any rate for transportation over which the rail carrier has market dominance under section 69-04-03-07 by an annual amount of not more than four percent of the adjusted base rate.

b. No portion of any rate increase under this subsection which is not implemented in the year in which it is authorized may be implemented in any other year.

c. (1) The provision of this subsection shall not apply to a rail carrier proposing to increase a single line rate if the carrier earns adequate revenues, as determined by the interstate commerce commission under 49 U.S.C. 10704(a)(2).

(2) The commission will, after a hearing on the record, prescribe rules or take whatever other action is necessary with respect to joint rates to ensure that rail carriers which earn adequate revenues, as determined by the interstate commerce commission under 49 U.S.C. 10704(a)(2), do not receive the rate increases authorized by this subsection unless the commission determines that it is unable to prescribe such rules without precluding rail carriers not earning adequate revenues from receiving the rate increases authorized under this subsection.

5. a. Notwithstanding the provisions of section 69-04-03-05, in the case of any rate increase that is authorized under subsection 3 or 4 of this section, the commission will not suspend the rate increase pending final commission action, and except as provided in subdivision b, the commission will not begin an investigation proceeding under section 69-04-03-05 with respect to the reasonableness of the rate increase, but an interested party may file a complaint alleging that such rate increase would violate the provisions of subtitle IV of title 49 of the United States Code for transportation performed in interstate commerce.

b. In considering any complaint challenging a rate increase that is authorized under subsection 3 and that results in a revenue-variable cost percentage that is less than the lesser of the percentages described in paragraph 1 of subdivision c of this subsection, the commission will, in determining the reasonableness of the rate increase, give due consideration to whether the carrier proposing the rate increase has attained adequate revenues, as determined by the interstate commerce commission under 49 U.S.C. 10704(a)(2), giving regard to preventing a carrier with adequate revenues from realizing excessive profits on the traffic involved and also the policy of bringing to an adequate level the revenues of carriers not having an adequate revenue level.

c. (1) If a rate increase authorized under this section in any year results in a revenue-variable cost percentage for the transportation to which the rate applies that is equal to or greater than twenty

percentage points above the revenue-variable cost percentage applicable in that year under subsection 4 of section 69-04-03-07, or a revenue-variable cost percentage of one hundred ninety percent, whichever is less, the commission may, on its own initiative, or on complaint of an interested party, begin an investigation proceeding to determine if the proposed rate increase would violate subtitle IV of title 49 of the United States Code for transportation performed in interstate commerce.

(2) In determining whether to investigate or not to investigate any proposed rate increase that results in a revenue-variable cost percentage for the transportation to which the rate applies that is equal to or greater than the lesser of the percentages described in paragraph 1 (without regard to whether such rate increase is authorized under this section), the commission will set forth its reasons therefor, giving due consideration to the following factors:

(a) The amount of traffic which is transported at revenues which do not contribute to going concern value and efforts made to minimize such traffic;

(b) The amount of traffic which contributes only marginally to fixed costs and the extent to which, if any, rates on such traffic can be changed to maximize the revenues from such traffic; and

(c) The impact of the proposed rate or rate increase on the attainment of the national energy goals and the rail transportation policy under 49 U.S.C. 10101a, taking into account the railroads' role as a primary source of energy transportation and the need for a sound rail transportation system in accordance with the revenue adequacy goals of 49 U.S.C. 10704.

This paragraph shall not be construed to change existing law with regard to the nonreviewability of such determination.

(3) In determining whether a rate is reasonable, the commission will consider, among other factors, evidence of the following:

(a) The amount of traffic which is transported at revenues which do not contribute to going

concern value and efforts made to minimize such traffic;

(b) The amount of traffic which contributes only marginally to fixed costs and the extent to which, if any, rates on such traffic can be changed to maximize the revenues from such traffic; and

(c) The carrier's mix of rail traffic to determine whether one commodity is paying an unreasonable share of the carrier's overall revenues.

6. In any proceeding under this section, evidence of the underlying rail carrier rate is admissible.

7. A finding by the commission that a rate increase exceeds the increase authorized under this section does not establish a presumption that the rail carrier proposing such rate increase has or does not have market dominance over the transportation to which the rate applies, or that the proposed rate exceeds or does not exceed a reasonable maximum.

8. The authority of the commission to determine and prescribe reasonable rules, classifications, and practices will not be used, directly or indirectly, to limit the rates which rail carriers would otherwise be authorized to establish under subtitle IV of title 49 of the United States Code for transportation performed in interstate commerce.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-07. Market dominance.

1. In this section, "market dominance" means an absence of effective competition from other carriers or modes of transportation for the transportation to which a rate applies.

2. When a rate for transportation by a rail carrier is challenged as being unreasonably high, the commission will determine, within ninety days after the start of a proceeding under section 69-04-03-05 to investigate the lawfulness of that rate, whether the carrier proposing the rate has market dominance over the transportation to which the rate applies. The commission may make that determination on its own initiative or on complaint. A finding by the commission that the carrier does not have market dominance is determinative in a proceeding under this chapter related to that rate or transportation unless changed or set aside by the commission or set aside by a court of competent jurisdiction.

3. When the commission finds in any proceeding that a rail carrier proposing or defending a rate for transportation has market dominance over the transportation to which the rate applies, it may then determine that rate to be unreasonable if it exceeds a reasonable maximum for that transportation. However, a finding of market dominance does not establish a presumption that the proposed rate exceeds a reasonable maximum. This subsection does not limit the power of the commission to suspend a rate under subsection 4 of section 69-04-03-05. However, if the commission has found that a carrier does not have market dominance over the transportation to which the rate applies, the commission will suspend an increase in that rate as being in excess of a reasonable maximum for that transportation only if it specifically changes or sets aside its prior determination of market dominance.

4. a. In this subsection:

   (1) "Cost recovery percentage" means the cost recovery percentage as annually determined by the interstate commerce commission pursuant to 49 U.S.C. 10709.

   (2) "Fixed and variable cost" means all cost incurred by rail carriers in the transportation of freight, but limiting the return on equity capital to a rate equal to the embedded cost of debt.

   b. In making a determination under this section, the commission will find that the rail carrier establishing the challenged rate does not have market dominance over the transportation to which the rate applies if such rail carrier proves that the rate charged results in a revenue-variable cost percentage for such transportation that is less than:

   (1) One hundred sixty-five percent during the period beginning October 1, 1981, and ending September 30, 1982;

   (2) One hundred seventy percent during the period beginning October 1, 1982, and ending September 30, 1983;

   (3) One hundred seventy-five percent or the cost recovery percentage, whichever is less, during the period beginning October 1, 1983, and ending September 30, 1984; and

   (4) The cost recovery percentage, during each twelve-month period beginning on or after October 1, 1984.

For purposes of paragraphs 3 and 4, the cost recovery percentage shall in no event be less than a revenue-variable cost percentage of one hundred seventy percent or more than a revenue-variable cost percentage of one hundred eighty percent.

c. For purposes of determining the revenue-variable cost percentage for a particular transportation, variable costs shall be determined by using the carrier's costs, calculated using a cost finding methodology adopted by the interstate commerce commission and indexed quarterly to account for current wage and price levels in the region in which the carrier operates, and with adjustments specified by the commission. A rail carrier may meet its burden of proof under this subsection by establishing its variable costs using a cost finding methodology adopted by the interstate commerce commission and indexed quarterly to account for current wage and price levels in the region in which the carrier operates, but a shipper may rebut that showing by evidence of such type, and in accordance with such burden of proof, as the commission shall prescribe.

d. A finding by the commission that a rate charged by a rail carrier results in a revenue-variable cost percentage for the transportation to which the rate applies that is equal to or greater than the applicable percentage under subdivision b does not establish a presumption that the rail carrier has or does not have market dominance over such transportation, or that the proposed rate exceeds or does not exceed a reasonable maximum.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-08. Base rates.

1. Any rate in effect on October 1, 1980, which was not challenged during the one hundred eighty-day period following that date by a complaint filed with the commission by an interested party alleging that the rail carrier has market dominance over the transportation to which the rate applies, as determined under section 69-04-03-07, and that the rate is not reasonable under section 69-04-03-01; or which was challenged in such a complaint, but the rail carrier is found not to have market dominance over the transportation to which the rate applies; or the rate is found reasonable shall be deemed to be reasonable and may not thereafter be challenged on ground of reasonableness in the commission or in any court other than on appeal from a decision of the commission.

2. The provisions of this section shall not apply to any rate under which the volume of traffic moved during the twelve-month period immediately preceding October 1, 1980, did not exceed five hundred net tons [453.59 metric tons] and has increased tenfold within the three-year period immediately preceding the bringing of a challenge to the reasonableness of such rate.

3. The burden of proof in a proceeding under this section shall be on the complainant.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-09. Contract rates.

1. One or more rail carriers may enter into a contract with one or more purchasers of rail services to provide specified services under specified rates and conditions. Such a rail carrier may not enter into a contract with purchasers of rail service except as provided in this section.

2. Each contract entered into under this section shall be filed with the commission, together with a summary of the contract containing the nonconfidential information prescribed by the interstate commerce commission pursuant to 49 U.S.C. 10713 for contract rates subject to the jurisdiction of the interstate commerce commission. The rail carriers shall publish the essential terms of the contract in the format prescribed by the interstate commerce commission pursuant to 49 U.S.C. 10713 for contract rail rates subject to the jurisdiction of the interstate commerce commission to assure the essential terms of the contract are available to the general public in tariff format.

3. A contract filed under this section will be approved by the commission, as provided in subsection 5, unless the commission determines in a proceeding under subsection 4 that the contract is in violation of this section.

4. a. No later than thirty days after the date of filing of a contract under this section, the commission may, on its own initiative or on complaint, begin a proceeding to review the contract on the grounds described in this subsection.

   b. (1) In the case of a contract other than a contract for the transportation of agricultural commodities (including forest products and paper), a complaint may be filed:

(a) By a shipper only on the grounds that the shipper individually will be harmed because the proposed contract unduly impairs the ability of the contracting carrier or carriers to meet their common carrier obligations to the complainant under section 69-04-03-10; or

(b) By a port only on the grounds that the port individually will be harmed because the proposed contract will result in unreasonable discrimination against the port.

(2) In the case of a contract for the transportation of agricultural commodities (including forest products and paper), in addition to the grounds for a complaint described in paragraph 1, a complaint may be filed by a shipper on the grounds that the shipper individually will be harmed because:

(a) The rail carrier has unreasonably discriminated by refusing to enter into a contract with the shipper for rates and services for the transportation of the same type of commodity under similar conditions to the contract at issue, and that shipper was ready, willing, and able to enter into such a contract at a time essentially contemporaneous with the period during which the contract at issue was offered; or

(b) The proposed contract would constitute a destructive competitive practice under subtitle IV of title 49 of the United States Code for transportation performed in interstate commerce.

In making a determination under subparagraph b, the commission shall consider the difference between contract rates and published single car rates.

(3) For purposes of this subdivision, the term "unreasonable discrimination" has the same meaning as such term has under section 69-04-03-11.

c. (1) Within thirty days after the date a proceeding is commenced under subdivision a the commission shall determine if the contract that is the subject of such proceeding is in violation of this section.

(2) If the commission determines, on the basis of a complaint filed under subparagraph a of paragraph 2 of subdivision b, that the grounds for a complaint described in such subparagraph have been established

with respect to a carrier, the commission will, subject to the provisions of this section, order the carrier to provide rates and service substantially similar to the contract at issue with such differentials in terms and conditions as are justified by the evidence.

5. Approval of a contract filed under this section shall be effective on the date the commission expressly approves such contract, but in no event before the end of the thirty-day period beginning on the date such contract is filed or after the end of the sixty-day period beginning on such date; or if the commission has not disapproved such contract by the end of the sixty-day period beginning on the date such contract is filed, at the end of such sixty-day period.

6. The commission may limit the right of a rail carrier to enter into future contracts under this section following a determination that additional contracts would impair the ability of the rail carrier to fulfill its common carrier obligations under section 69-04-03-10.

7. The commission will not require a rail carrier to violate the terms of a contract that has been approved under this section, except under the circumstances set forth in 49 U.S.C. 11128.

8. A party to a contract entered into under this section shall have no duty in connection with services provided under such contract other than those duties specified by the terms of the contract.

9. a. A contract that is approved by the commission under this section, and transportation under such contract, shall not be subject to the provisions of this chapter, and may not be subsequently challenged before the commission or in any court on the grounds that such contract violates a provision of this chapter.

   b. The exclusive remedy for any alleged breach of a contract entered into under this section shall be an action in an appropriate state court or United States district court, unless the parties otherwise agree.

10. The provisions of this section shall not affect the status of any lawful contract between a rail carrier and one or more purchasers of rail service that was in effect on October 1, 1980. Any such contract shall hereafter have the same force and effect as if it had been entered into in accordance with the provisions of this section. Nothing in this section shall affect the rights of the parties to challenge the existence of such a contract.

11. a. Any rail carrier may, in accordance with the terms of this section, enter into contracts for the transportation of agricultural commodities (including forest products and paper) involving the utilization of carrier owned or leased equipment not in excess of forty percent of the capacity of such carrier's owned or leased equipment by major car type (plain boxcars, covered hopper cars, gondolas and open top hoppers, coal cars, bulkhead flatcars, pulpwood rackcars, and flatbed equipment, including TOFC/COFC), except that in the case of a proposed contract between a class I carrier (as defined by the interstate commerce commission) and a shipper originating an average of one thousand cars or more per year during the prior three-year period by major car type on a particular carrier, not more than forty percent of carrier owned or leased equipment utilized on the average during the prior three-year period may be used for such contract without prior authorization by the commission.

b. The commission may, on request of a rail carrier or other party or on its own initiative, grant such relief from the limitations of subdivision a of this subsection as the commission considers appropriate, if it appears that additional equipment may be made available without impairing the rail carrier's ability to meet its common carrier obligations under section 69-04-03-10.

12. Service under a contract approved under this section will be deemed to be a separate and distinct class of service, and the equipment used in the fulfillment of such a contract shall not be subject to car service decisions.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-10. Common carrier obligation. The intrastate common carrier obligations of a rail carrier shall be the same as those prescribed by the interstate commerce commission for rail carriers engaged in interstate commerce.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-11. Discrimination.

1. A rail carrier may not charge or receive from a person a different compensation (by using a special rate, rebate, drawback, or another means) for a service rendered, or to be rendered, in transportation the carrier may perform under

North Dakota Century Code section 49-10.1-01, than it charges or receives from another person for performing a like and contemporaneous service in the transportation of a like kind of traffic under substantially similar circumstances. A common carrier that charges or receives such a different compensation for that service unreasonably discriminates.

2. A rail carrier may not subject a person, place, or type of traffic to unreasonable discrimination. However, subject to subsection 3, this subsection does not apply to discrimination against the traffic of another carrier providing transportation by any mode.

3. A rail carrier may not subject a freight forwarder (as defined in 49 U.S.C. 101020F) to unreasonable discrimination whether or not the freight forwarder is controlled by that carrier.

4. Differences between rates, classifications, rules, and practices of rail carriers do not constitute a violation of this section if such differences result from different services provided by rail carriers.

5. This section shall not apply to:

   a. Contracts approved under section 69-04-03-09, other than as provided in subparagraph b of paragraph 1 of subdivision b of subsection 4 and paragraph 2 of subdivision b of subsection 4 of such section.

   b. Surcharges or cancellations under section 69-04-03-20.

   c. Separate rates for distinct rail services under section 69-04-03-12.

   d. Rail rates applicable to different routes.

   e. Expenses authorized under section 69-04-03-13.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-12. Separate rates for distinct services.

1. A rail carrier may, on its own initiative or at the request of a shipper or receiver of property, establish separate rates for distinct rail services to:

   a. Encourage competition;

   b. Promote increased reinvestment by rail carriers; and

c. Encourage and make easier increased nonrailroad investment in the production of rail services.

2. The commission will exercise expeditious action to permit separate rates for distinct rail services to:

   a. Encourage those services to be priced in accordance with the cash-outlay incurred by the carrier and the demand for them; and

   b. Enable shippers and receivers to evaluate transportation and related rates and alternatives.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-13. Business entertainment expenses.

1. Any business entertainment expense incurred by a rail carrier shall not constitute a violation of section 69-04-03-11 or 69-04-03-14 if such expense would not be unlawful if incurred by a person or corporation not subject to the jurisdiction of the commission.

2. Any business entertainment expense authorized under this section that is paid or incurred by a rail carrier shall not be taken into account in determining the cost of service or the rate base for purposes of this chapter.

3. Any business entertainment expense authorized under this section may be paid or incurred only in accordance with the standards and guidelines prescribed by the interstate commerce commission pursuant to 49 U.S.C. 10751.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-14. Tariff required. Except as provided in this chapter, a rail carrier shall provide a transportation or service only if the rate for the transportation or service is contained in a tariff that is in effect under this chapter. That carrier may not charge or receive a different compensation for that transportation or service than the rate specified in the tariff whether by returning a part of that rate to a person, giving a person a privilege, allowing the use of a facility that affects the value of that transportation or service, or another device.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03

Law Implemented: NDCC 49-10.1-01

69-04-03-15. Exemption of rail transportation.

1. The commission will exempt a person, class of persons, or a transaction or service when the commission finds that the application of a provision of this chapter:

   a. Is not necessary to carry out the transportation policy set forth in 49 U.S.C. 10101a; and

   b. Either the transportation or service is of limited scope, or the application of a provision of this chapter is not needed to protect shippers from the abuse of market power.

2. The commission may, where appropriate, begin a proceeding under this section on its own initiative or on application by an interested party.

3. The commission may specify the period of time during which an exemption granted under this section is effective.

4. The commission may revoke an exemption, to the extent it specifies, when it finds that application of a provision of this chapter to the person, class, or transportation is necessary to carry out the transportation policy set forth in 49 U.S.C. 10101a.

5. No exemption order issued pursuant to this section will operate to relieve any rail carrier from an obligation to provide contractual terms for liability and claims. Nothing in this subsection shall prevent rail carriers from offering alternative terms nor give the commission the authority to require any specific level of rates or services based upon the carrier's obligation to provide contractual terms for liability and claims.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-16. Rates and liability based on value. A rail carrier may establish rates for transportation of property under which the liability of the carrier for such property is limited to a value established by written declaration of the shipper or by a written agreement between the shipper and the carrier, and may provide in such written declaration or agreement for specified amounts to be deducted from any claim against the carrier for loss or damage to the property or for delay in the transportation of such property.

History: Effective September 1, 1982.

General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-17. Rates for recyclable materials.

1. In this section:

   a. "Recyclable material" means material collected or recovered from waste for a commercial or industrial use whether the collection or recovery follows end usage as a product.

   b. "Virgin material" means raw material, including previously unused metal or metal ore, woodpulp or pulpwood, textile fiber or material, or other resource that, through the application of technology, is or will become a source of raw material for commercial or industrial use.

2. When appropriate, the commission will:

   a. Investigate the rate structure for the transportation of recyclable or recycled materials and competing virgin material by rail carriers and the manner in which that rate structure has been affected by successive general rate increases approved by the commission or the interstate commerce commission for those carriers.

   b. Determine whether those rate increases affect any part of the rate structure in violation of section 69-04-03-18 or 69-04-03-11 and order the rate found to be in violation of either of those sections removed from the rate structure.

3. A determination under subdivision b of subsection 2 may be made only after a public hearing. During the hearing, the rail carriers have the burden of proving that rate increases that affect the rate structure applicable to the transportation of those competing materials comply with sections 69-04-03-18 and 69-04-03-11.

4. Notwithstanding any other provision of this chapter, all rail carriers shall take all actions necessary to reduce and thereafter maintain rates for the transportation of recyclable or recycled materials, other than recyclable or recycled iron or steel, at revenue-to-variable cost ratio levels that are equal to or less than the average revenue-to-variable cost ratio that rail carriers would be required to realize, under honest, economical, and efficient management, in order to cover total operating expenses, including depreciation and obsolesence, plus a reasonable and economic profit or return (or both) on capital employed in the business sufficient to attract and retain capital in amounts adequate to provide a sound transportation system in the United States. As long as

any such rate equals or exceeds such average revenue-to-variable cost ratio established by the commission, such rate shall not be required to bear any further rate increase.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-18. Through routes and joint rates.

1. A through route established by rail carriers must be reasonable. Divisions of joint rates by those carriers must be made without unreasonable discrimination against a participating carrier and must be reasonable.

2. A rail carrier may not discriminate in its rates against a connecting line of another rail carrier providing transportation subject to the jurisdiction of the commission or unreasonably discriminate against that line in the distribution of traffic that is not routed specifically by the shipper.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-19. Through routes and joint rates prescribed by the commission.

1. The commission will when it considers it desirable in the public interest, prescribe through routes, joint classifications, joint rates (including maximum or minimum rates or both), the division of joint rates and the conditions under which those routes must be operated, for a rail carrier.

2. The commission will prescribe through routes, joint classifications, joint rates, the division of joint rates and the conditions under which those routes must be operated, in accordance with the standards and procedures set forth in 49 U.S.C. 10705 for the prescription of such rates, routes, and conditions for rail carriers providing interstate transportation.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-20. Joint rate surcharges and cancellations.

1. A rail carrier may publish and apply a surcharge increasing or decreasing the through charge applicable to any movement between points designated by the surcharging carrier subject to a joint rate only in accordance with the standards and procedures set forth in 49 U.S.C. 10705a for application of such surcharges by rail carriers providing interstate transportation.

2. Any other carrier that participates in any movement subject to a surcharge, or the commission, may cancel the application of such surcharge or a portion of such surcharge only in accordance with the standards and procedures set forth in 49 U.S.C. 10705a for the cancellation of such charges applied to interstate transportation.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-21. General and inflation increases and fuel surcharges. Notwithstanding any other provision of this chapter, the commission will not exercise jurisdiction over any of the following:

1. General rail rate increases implemented under 49 U.S.C. 10706.

2. Inflation-based rate increases implemented under 49 U.S.C. 10712.

3. Fuel adjustment surcharges approved by interstate commerce commission.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-22. General tariff requirements.

1. A rail carrier shall publish and file with the commission tariffs containing the rates, and classifications, rules, and practices related to those rates, established under this chapter. Such tariffs shall be kept open for public inspection.

2. a. Tariffs must identify plainly:

   (1) The places between which property will be transported;

   (2) Terminal, storage, and icing charges (stated separately);

(3) Privileges given and facilities allowed; and

(4) Any rules that change, affect, or determine any part of the published rate.

b. A joint tariff filed by a carrier shall identify the carriers that are parties to it. The carriers that are parties to a joint tariff, other than the carrier filing it, must file a concurrence or acceptance of the tariff with the commission but are not required to file a copy of the tariff.

3. a. When a rail carrier proposes to change a rate, the carrier shall publish, file, and keep open for public inspection a notice of the proposed change as required under subsections 1 and 2.

b. A notice filed under this subsection shall plainly identify the proposed change or new or reduced rate and indicate its proposed effective date. A proposed rate change resulting in an increased rate or a new rate shall not become effective for twenty days after the notice is published and a proposed rate change resulting in a reduced rate shall not become effective for ten days after the notice is published, except that a contract authorized under section 69-04-03-09 shall become effective in accordance with the provisions of such section.

4. a. The commission may reduce the notice period of this subsection if cause exists. The commission may change the other requirements of this section if cause exists in particular instances or as they apply to special circumstances.

b. All rates of rail carriers and rail ratemaking associations shall be incorporated in their individual tariffs by the end of the second year after initial publication of the rate, or by the end of the second year after a change in a rate becomes effective, whichever is later. A rate not incorporated in an individual tariff as required by the commission is void.

5. The commission may reject a tariff submitted to it by a common carrier under this section if that tariff violates this section.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-23. National transportation policy.

1. The commission will exercise its jurisdiction over rail carrier rates in a manner consistent with the rail transportation policy of the United States set forth at 49 U.S.C. 10101a.

2. Where standards and procedures for the regulation of rail carrier rates are not specifically set forth in this chapter, the commission will exercise its jurisdiction over rail carrier rates under the standards and procedures for rail carrier rates prescribed in subtitle IV of title 49 of the United States Code.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

69-04-03-24. Rail rate proceedings. Rail carrier rate proceedings will be conducted in accordance with the provisions of North Dakota Century Code chapters 49-05 and 28-32 and North Dakota Administrative Code article 69-02 except to the extent they are inconsistent with the provisions of this chapter or subtitle IV of title 49 of the United States Code in which case the latter provisions will control.

History: Effective September 1, 1982.
General Authority: NDCC 49-10.1-03
Law Implemented: NDCC 49-10.1-01

TITLE 71

Retirement Board

SEPTEMBER 1982

71-02-01-01. Definitions. As used in North Dakota Century Code chapter 54-52 and this article:

1. "Accumulated contributions" ~~is~~ means the total of all of the following:

   a. The employee account fund balance accumulated under the prior plan as of June 30, 1977.

   b. The vested portion of the employee's "vesting fund" accumulated under the prior plan as of June 30, 1977.

   c. The member's mandatory contributions made after July 1, 1977.

   d. The interest on the sums determined under subdivisions a, b, and c, compounded annually at the rate of five percent from July 1, 1977, to June 30, 1981, and six percent from July 1, 1981, to the member's termination of employment or retirement.

2. "Actuarial equivalent" means a benefit calculated to be of equal value to the benefit otherwise payable when computed on the basis of assumptions and methods adopted for this purpose by the board.

3. "Beneficiary" means any person in receipt of a benefit provided by this plan or any person designated by a participating member to receive benefits.

4. "Continuously employed" means any period of employment uninterrupted by voluntary or involuntary quit or discharge. A member who has taken a leave of absence approved by the member's employer, not to exceed a year unless approved by the

board, and returns to employment shall be regarded as continuously employed for the period.

5. "Eligible employee" means:

   a. A permanent employee who has attained age eighteen.

   b. A person elected or appointed to the office of judge of the supreme court or judge of the district court for the first time, as defined in North Dakota Century Code section 54-52-02.3, from the date the person qualifies and takes office.

   c. An appointive or elective official of a participating governmental unit, from the date the official takes office.

6. "Employee" means any person employed by a governmental unit, whose compensation is paid out of the governmental unit's funds, or funds controlled or administered by a governmental unit, or paid by the federal government through any of its executive or administrative officials; certified employees of a school district means those employees eligible to participate in the teachers' fund for retirement who shall not be eligible employees under North Dakota Century Code 54-52.

7. "Employer" means a governmental unit.

8. "Governmental unit" means the state of North Dakota or a county or city thereof, a school district, including the Fargo school district, a district health unit, and the Garrison Diversion Conservancy District. An "eligible" or "participating" governmental unit is one which has agreed to extend the benefits of the public employees retirement system to its employees as provided in North Dakota Century Code section 54-52-02.1.

9. "Member" and "participating member" means an eligible employee who through payment into the plan has established a claim against the plan and who has not withdrawn the employee's accumulated contributions. This definition includes a person who, although no longer a permanent employee, has attained eligibility for a deferred vested retirement benefit.

10. "Normal retirement date" means the first day of the month next following the month in which a member attains age sixty-five.

11. "Office" means the administrative office of the public employees retirement system.

12. "Permanent employee" means a governmental unit employee ~~who has been employed by an eligible governmental unit for five continuous months, and is employed for~~

~~more than twenty hours per week and more than five months each year~~ whose services are not limited in duration and who is filling an approved and regularly funded position and is employed for more than twenty hours per week and more than five months each year.

13. "Plan year" means the twelve consecutive months commencing July first of the calendar year and ending June thirtieth of the subsequent calendar year.

14. "Prior plan" means the state employees' retirement system which existed from July 1, 1966, to June 30, 1977.

15. "Prior service" means service or employment prior to July 1, 1966.

16. "Retiree" as used in subdivisions a and c of subsection 4 of North Dakota Century Code section 54-52-17 means a member.

17. "Service" means employment on or after July 1, 1966.

18. "Termination of employment" means a severance of employment by not being on a payroll of a covered employer for a minimum of one month.

19. "Wages" and "salaries" means the actual dollar compensation excluding overtime paid to or for an employee for services.

History: Amended effective September 1, 1982.
General Authority: NDCC 54-52-01
Law Implemented: NDCC 54-52-01

71-02-02-01. Membership - General rule. Each eligible employee shall automatically become a member of the public employees retirement system and shall file a membership form with the office, except:

1. An eligible employee who was a member of the prior plan on June 30, 1977, shall be deemed to have concurred in the plan in writing as provided in North Dakota Century Code section 54-52-05.

2. An ~~appointive or elective~~ elected official of a participating governmental unit may elect whether to become a member.

~~3. An eligible employee who was a member of the prior plan and continuously employed by a participating governmental unit from July 1, 1966, to June 30, 1977, may elect not to become a member by filing the appropriate form with the office during July 1977.~~

History: Amended effective September 1, 1982.
General Authority: NDCC 54-52-05
Law Implemented: NDCC 54-52-02.4, 54-52-05

71-02-03-01. Service credit - General rule. A member shall receive a month of service credit during each month in which the member works at least twenty hours per week. Service credit shall not be granted for:

1. Prior service unless the member was continuously employed from July 1, 1966, to June 30, 1977, by a governmental unit participating in the prior plan during such period.

2. Any service between July 1, ~~1977~~ 1966, and July 1, 1977, for which the member did not make contributions under the prior plan or does not purchase service credit as provided in North Dakota Century Code section 54-52-02.4. The contribution rate, excluding interest, for purchase of credit for those years is as follows:

   July 1, 1966, to June 30, 1969: four percent of total salary plus four percent of salary up to seven thousand five hundred dollars;

   July 1, 1969, to June 30, 1973: four percent of total salary plus four percent of salary up to twelve thousand five hundred dollars;

   July 1, 1973, to June 30, 1977: four percent of total salary plus four percent of salary up to fifteen thousand dollars.

3. Any period, exceeding a year, in which the member is on a leave of absence and returns to employment. A member may receive service credits for a leave of absence approved by the member's employer and certified to the office, not to exceed a year unless approved by the board, if the member pays an amount to the fund equal to the member and employer contributions on the member's first salary upon return to service multiplied by the months to be purchased, plus ~~five~~ six percent interest. Election to purchase service credit for an approved leave of absence must be made within ninety days of reemployment. Payment may be made in lump sum or on an installment basis of ten percent per year plus six percent interest on the outstanding balance. Payment must start within twelve months of reemployment.

History: Amended effective September 1, 1982.
General Authority: NDCC 54-52-17
Law Implemented: NDCC 54-52-17

71-02-03-02. Military credit. A member whose employment is interrupted by military service and who returns to employment within ninety days after discharge may purchase credit for such military service, if the member pays an amount to the fund equal to the employer and member contributions on the member's first salary upon return to service multiplied by the months to be purchased, plus ~~five~~ six percent interest. The time period to elect repurchase, to begin repayment and the maximum time period to repurchase are the same as in subsection 3 of section 71-02-03-01.

History: Amended effective September 1, 1982.
General Authority: NDCC 54-52-17
Law Implemented: NDCC 54-52-17

71-02-03-03. Service after age sixty-five. ~~No service credit shall be received for service after the normal retirement date.~~

General Authority: ~~NDCC 54-52-17~~
Law Implemented: ~~NDCC 54-52-17~~

Repealed as the result of S.L. 1981, ch. 547, § 1.

71-02-04-04. Optional benefits. A member may elect, as provided in section 71-02-04-02, to receive one of the following optional benefits in lieu of the regular early or normal retirement benefit. These benefits shall be computed on the basis of tables adopted from time to time by the board.

1. One hundred percent joint and survivor benefit. A member shall receive a smaller monthly benefit than the normal retirement benefit during the member's lifetime and after the member's death such smaller amount will be continued to the member's designated beneficiary during the beneficiary's lifetime. Payments of benefits to a member's beneficiary shall be made on the first day of each month commencing on the first day of the month following the member's death, if the member's beneficiary is then living, and shall terminate in the month in which the death of the beneficiary occurs, ~~or if the beneficiary is a surviving spouse, upon remarriage~~.

2. Fifty percent joint and survivor benefit. A member shall receive a smaller monthly benefit during the member's lifetime and after the member's death one-half the rate of such smaller amount will be continued to the member's designated beneficiary during the beneficiary's lifetime, and shall terminate in the month the death of the beneficiary occurs, ~~or if the beneficiary is the surviving spouse, upon remarriage~~.

3. Social security adjustment option. A member who retires prior to the member's normal retirement date with an early retirement benefit, may elect a social security adjustment option under which the member will receive such early retirement benefit actuarially adjusted for the years before and after the member attains age sixty-two, or before and after the member retires, if later than age sixty-two but before age sixty-five, so that the monthly benefit payments until such date will be substantially the same as the monthly benefit payments plus the amount of primary benefits under the federal Social Security Act expected to become payable to the member after such date.

4. Five- or ten-year certain option. A member may elect an option which is the actuarial equivalent of the member's normal, early, or deferred vested retirement pension payable for life with a five- or ten-year certain feature, as designated by the member.

History: Amended effective September 1, 1982.
General Authority: NDCC 54-52-17
Law Implemented: NDCC 54-52-17

71-02-04-07. Amount of early retirement benefit. The early retirement benefit shall be an amount actuarially reduced from the normal retirement benefit by one-half ~~or~~ of one percent for each month (six percent per year) that the member is younger than age sixty-five on the date the member's early retirement benefit commences.

History: Amended effective September 1, 1982.
General Authority: NDCC 54-52-17
Law Implemented: NDCC 54-52-17

71-02-05-01. Eligibility. A member shall be entitled to a disability retirement benefit provided all of the following occur:

1. The member becomes totally disabled, prior to the member's normal retirement date.

2. The member has accumulated ~~ten or more years~~ one hundred eighty days of service credit to the first day of the month immediately following the determination that total disability exists.

3. The member retires from active employment with the employer and files a written application for a disability retirement benefit with the office on a form prescribed for that purpose by the board.

4. The member has been approved for a disability benefit under the federal Social Security Act.

5. The member has executed a release of information form authorizing the social security administration to furnish the board with evidence of continued disability when requested by the board.

History: Amended effective September 1, 1982.
General Authority: NDCC 54-52-17
Law Implemented: NDCC 54-52-17

71-02-05-02. Commencement of benefit. ~~Payment of the disability pension shall not commence until five full calendar months of disability have elapsed or until the requirement for advance application has been met, whichever is the later date.~~ If the application is filed within sixty days of the date of the determination that the member is entitled to a social security disability benefit, the state disability benefit shall be payable beginning the first of the month coincident with or following the effective date of the social security award or date of termination, whichever is the later date. If the application is not filed within sixty days of the social security determination, the benefit shall commence on the first day of the month which follows such determination and which is at least sixty days after filing such application.

History: Amended effective September 1, 1982.
General Authority: NDCC 54-52-17
Law Implemented: NDCC 54-52-17

71-02-05-04. Calculation of disability benefit. Calculation of a member's disability benefit will be based on the following:

1. The member's average monthly salary, which is the average of the best sixty months of salary out of the last one hundred twenty months of salary. Should a member have less than sixty months of salary, then those months of salary available shall be averaged to determine the average monthly salary.

2. Once the average monthly salary has been determined, then sixty percent will be applied to the average monthly salary to determine the basic benefit. The basic benefit will then be reduced by the primary social security benefit and any workmen's compensation benefit paid. The net amount will then be paid to the disabled member on a monthly basis.

History: Effective September 1, 1982.
General Authority: NDCC 54-52-17
Law Implemented: NDCC 54-52-17

71-02-05-05. Conditions for changing to a disability retirement benefit from an early reduced retirement benefit. A member may elect to start receiving an early reduced retirement benefit, should the member

be eligible to do so, pending a disability determination by the federal social security office. Upon receipt of the disability determination letter, the member/retiree may apply for a disability retirement benefit to be paid subject to the following criteria:

1. Should the retiree provide proof of disability prior to receiving the equivalent of twelve installments of the early reduced benefit, the disability benefit will be calculated and a differential payment made retroactive from the date of the first early reduced benefit payment.

2. Should the retiree not provide proof of disability prior to receiving the equivalent of twelve installments of the early reduced benefit, the disability benefit will be calculated and paid on the first of the month following application for a disability retirement benefit.

History: Effective September 1, 1982.
General Authority: NDCC 54-52-17
Law Implemented: NDCC 54-52-17

71-02-06-03. Inapplicability of return of contribution guarantee. ~~The guarantee of return of a member's contributions as provided in subsection 8 of North Dakota Century Code section 54-52-17 shall not apply to a member who elects a retirement option as provided in subdivision a of subsection 9 of North Dakota Century Code section 54-52-17.~~

General Authority: ~~NDCC 54-52-17.7~~
Law Implemented: ~~NDCC 54-52-17.7~~

Repealed effective September 1, 1982.

71-02-07-01. Return to service - Unretired member. A member who terminates service and receives a return of the member's accumulated contributions, then subsequently is reemployed:

1. Shall not receive service credit for any period prior to reemployment if the member had earned ~~at least~~ ten or more years of service credit prior to reemployment; or

2. May receive service credit for any period prior to reemployment if the member had less than ten years of service credit and applies with the office within ninety days after reemployment to repay the fund the total amount of accumulated contributions together with ~~five~~ six percent interest compounded from the date of return of such contributions to date of repayment. The member must begin repayment of the returned contributions within twelve months of reemployment. ~~An employee~~ A member may choose to pay such required amount

to the fund in installments of ten percent per year plus ~~five~~ six percent annual interest. If a member elects to repay on an installment basis, there shall be a schedule of payments (amortization table) developed showing the amount of the payment and when the payment is due. Failure to remit payment in fifteen days of due date will cause the account to become delinquent and the member has an additional forty-five days to make payment. If after sixty days from the due date payment has not been received, the terms of the repurchase agreement shall be considered void and the amount repaid to date, excluding interest charged, shall be refunded. Once a member fails to meet the terms of the original agreement, the member shall be excluded from repurchasing that service in the future. If ~~an employee~~ a member retires before paying the entire amount, the ~~employee's~~ member's benefit shall be correspondingly reduced.

History: Amended effective September 1, 1982.
General Authority: NDCC 54-52-17
Law Implemented: NDCC 54-52-17, 54-52-02.6

~~71-02-08-01. Withdrawal. Any governmental unit participating in the prior plan may elect not to participate in the public employees retirement system and to withdraw the total sums of its employee and employer accounts, subject to all of the following conditions:~~

~~1. The legislative body of the governmental unit makes written application to the board on or before July 31, 1977.~~

~~2. The governmental unit assumes the responsibility for dispersing the employee account balance as determined in the aggregate by the board.~~

~~3. The governmental unit makes an appropriation to fund the total liability of the benefits payable to members who are receiving or eligible to receive benefits under the prior plan. The amount of such lump sum appropriation shall be calculated under the direction of the board.~~

Participation. Any governmental unit not participating in the retirement system on July 1, 1977, may choose to participate in the retirement system. Prior to the governmental unit's governing authority contracting with the retirement board, the governmental unit must furnish the board with information concerning the permanent employees of the governmental unit. This information should contain, but is not limited to: (1) name; (2) social security number; (3) date of birth; (4) date of employment; (5) current monthly salary; and (6) any previous public employment.

After receipt of this data, the retirement office will calculate the cost to the governmental unit to participate in the retirement plan as offered in North Dakota Century Code section 54-52-17. The governmental unit's governing authority will then decide whether or not to participate in the plan and whether or not to provide service credit for employment prior to the date of participation.

History: Amended effective September 1, 1982.
General Authority: NDCC 54-52-02.1
Law Implemented: NDCC 54-52-02.1

71-02-08-02. Withdrawal. Any political subdivision may discontinue participation in the fund. The political subdivision must first provide the board with a copy of a resolution adopted by the governing authority authorizing withdrawal from the fund. After receiving the resolution the board will then calculate, with the help of the fund's actuary, the amounts to be deposited with the fund to provide future benefit payments for those who are eligible.

History: Effective September 1, 1982.
General Authority: NDCC 54-52-02.1
Law Implemented: NDCC 54-52-02.1

TITLE 81

Tax Commissioner

OCTOBER 1982

81-02-02-04. Lieu tax - Certificate of title - License plates. The mobile home tax is in lieu of all other property taxes upon the mobile home. The tax does not, however, exempt the owner of a mobile home from the requirements of registering the mobile home for title purposes with the North Dakota motor vehicle registrar or from the requirements of North Dakota Century Code section 39-18-03 for obtaining license plates from that official for any year in which the mobile home is transported on the streets or highways of this state by anyone other than a driveaway transporter duly registered and licensed under the laws of this state.

General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-05

Repealed effective October 1, 1982.

81-02-02-08. Form and design prescribed by state tax commissioner. The North Dakota tax commissioner is required by the mobile home tax law to specify the size and design of the tax decals and to arrange for the manufacture of the decals. The county director of tax equalization is required to order sufficient decals for the director's county and the cost of such decals shall be paid by the county.

General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-02, 57-55-06

Repealed effective October 1, 1982.

81-02-02-09. Tax payment required when tax decal issued. A prenumbered tax decal shall be issued by the county treasurer if an application is accompanied by payment in full of the tax.

If the applicant pays the tax in installments, the county treasurer shall issue a ~~prenumbered~~ receipt for the first installment tax decal; upon payment of the second installment, the county treasurer shall issue the applicant a prenumbered tax decal ~~that is identified by the same number as that which appeared on the first installment tax decal~~.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-03

81-02-02-11. Where displayed on mobile home. ~~The mobile home tax decal shall be attached to the mobile home in a conspicuous place where the decal will be readily visible from the street. The mobile home tax law provides that a mobile home owner who fails to attach the tax decal to the mobile home shall be guilty of a class B misdemeanor, which is punishable by a fine of not more than five hundred dollars, or by imprisonment for not more than thirty days, or by both such fine and imprisonment.~~

General Authority: ~~NDCC 57-55-09~~
Law Implemented: ~~NDCC 57-55-02, 57-55-06, 57-55-07~~

Repealed effective October 1, 1982.

81-02-02-12. Nontransferable - Penalty provisions. The tax decal issued for a particular mobile home is nontransferable and cannot be used on any other mobile home. If the mobile home owner sells the mobile home or trades it in on another mobile home or on other property or disposes of it in any other manner, the decal must remain on that mobile home. ~~The mobile home tax law provides that any person who shall either use a tax decal or allow it to be used for any purpose other than for a mobile home for which it was issued shall be guilty of a class B misdemeanor and punished accordingly.~~

History: Amended effective October 1, 1982.
General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-07

81-02-02-13. Valid in all counties of state. ~~The tax decal when issued to the applicant by the county treasurer for a particular mobile home is valid in any part of the state to~~

~~which the mobile home might be taken during the remaining part of a year for which the decal was issued. (See also section 81-02-02-07.)~~

General Authority: ~~NDCC 57-55-09~~
Law Implemented: ~~NDCC 57-55-01.1~~

Repealed effective October 1, 1982.

81-02-02-16. Evaluation by county director of tax equalization. ~~The county director of tax equalization shall place an "evaluation" on each mobile home subject to tax, that is, the director shall value the mobile home that is described on the application for the tax decal. (See section 81-02-02-06.)~~

General Authority: ~~NDCC 57-55-09~~
Law Implemented: ~~NDCC 57-55-04~~

Repealed effective October 1, 1982.

81-02-02-19. Computing depreciated value. After the valuation as if new has been assigned to the mobile home as provided in section 81-02-02-18, that valuation figure shall then be multiplied by the appropriate "percentage good" factor as ~~shown~~ suggested in tax department guidelines for computing depreciated value ~~that takes~~, taking into account the age ~~and~~, quality, and condition of the mobile home.

~~When calculating the assessed valuation of the mobile home, use the most current sales ratio study percentage for residential property in your county.~~

The age of a mobile home shall coincide with a calendar year, that is, for mobile home tax purposes, a mobile home will become one year older on each January first.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-04

81-02-02-20. Evaluation, or taxable value. After the depreciated value of a mobile home has been computed as provided in section 81-02-02-19, that depreciated value figure shall then be multiplied by ~~the ratio obtained by dividing the assessed value of all other locally assessed residential property in the county by~~

~~the market value of such property, and the product thereof shall then be multiplied by five-tenths to obtain the evaluation, or taxable value, of the mobile home~~ fifty percent to obtain the assessed valuation. When calculating the taxable valuation of the mobile home, use nine percent of the assessed valuation on mobile homes used as a residence and ten percent of the assessed valuation on mobile homes used for a place of business.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-04

81-02-02-21. Method of determining tax. The evaluation, or taxable value, of the mobile home as computed in accordance with section 81-02-02-20 shall be multiplied by the preceding year's total mill levies that were applied to other taxable property within the taxing district in which the mobile home is located. This will result in the total amount of tax due. For example, in the case of the ~~1978~~ 1982 mobile home tax, the county director of tax equalization, after having calculated the evaluation or taxable value of the mobile home, shall then multiply that taxable value by the total of the mills levied in ~~1977~~ 1981 on other taxable property in the taxing district in which the mobile home is located; the total of the ~~1977~~ 1981 mill levies shall be used in computing the tax in ~~1978~~ 1982 for the full year of ~~1978~~ 1982 or any part of that year.

Similarly, the tax for ~~1979~~ 1983 shall be determined by multiplying the ~~1979~~ 1983 evaluation or taxable value by the total mill levies that were applicable in ~~1978~~ 1982, and so on. The levies for the preceding year shall be used even though the tax is prorated in the manner provided in section 81-02-02-22 and North Dakota Century Code section 57-55-04.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-04

81-02-02-22. Prorating tax for part of year. ~~If a mobile home owner applies to the county director of tax equalization for a tax decal for a mobile home that the owner acquired prior to January first of the year for which the tax decal is to be issued, the amount of the tax due shall be the amount as determined in section 81-02-02-21. If the applicant acquires the mobile home after January first in the year for which the decal is to be issued, the amount of the tax shall be determined by computing the remaining number of months of the year to the nearest full month multiplied by one-twelfth of the amount as determined in section 81-02-02-21.~~

. If the mobile home owner acquired the mobile home during the year, the county director of tax equalization shall not place an evaluation on

it and tax it for that year if a tax decal was previously issued for that mobile home for that year in the same county or in any other county of this state.

If the mobile home owner acquired the mobile home during the year and the mobile home was taxed for that year in another state, the owner shall, nevertheless, make application to the county director of tax equalization for a tax decal for that year and the tax thereon shall be determined by the county director of tax equalization in accordance with ~~the first paragraph of this~~ North Dakota Century Code section 57-55-04.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-04

81-02-02-23. Procedures for payment of the mobile home tax. When the county director of tax equalization has completed the computation of the mobile home decal tax section of the application for the mobile home tax decal, the director shall retain ~~the third~~ one copy for the director's files and shall deliver the original and a second copy of such application to the county treasurer. It shall be the responsibility of the county treasurer to collect such taxes and penalties that are due. Upon payment of the tax in full or payment of the first installment, the county treasurer shall issue to the mobile home owner a receipt showing the amount of the payment and the type of tax. The county treasurer shall then record the receipt number and the mobile home tax decal number on the face of the application and shall give the second copy of the application to the mobile home owner and retain the original copy for the treasurer's files. It will be necessary for the county treasurer to establish and maintain an accounts receivable account for those mobile home owners who make application to pay the mobile home tax in installments. Upon collection of any installment payment of the mobile home tax, the county treasurer shall issue a receipt showing the amount of the installment paid and the type of tax. Such payments shall be properly credited to the accounts receivable account. If an installment payment becomes delinquent, the county treasurer shall inform the county director of tax equalization of such delinquency and the director shall give the mobile home owner the notice provided for in North Dakota Century Code section ~~81-02-02-38~~ 57-55-11.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-03, 57-55-04

81-02-02-25. Installment payments. ~~If the mobile home tax determined by the county director of tax equalization amounts to forty dollars or more, the tax may be paid in two equal installments. The first installment shall become due on the day on which the entire tax would otherwise have~~

~~become due and the second installment shall become due on June first. A mobile home tax which becomes due after June first may not be paid in installments but shall be paid in full.~~

General Authority: ~~NDCC 57-55-09~~
Law Implemented: ~~NDCC 57-55-03~~

Repealed effective October 1, 1982.

~~81-02-02-26. Delinquencies and penalties. The first installment of a mobile home tax due from a mobile home owner shall become due on January tenth and shall become delinquent on the first day of March following and, if not paid on or before said date, shall be subject to a penalty of two percent, and on April first following an additional penalty at the rate of two percent, and on May first following an additional penalty of two percent, and an additional penalty of two percent on June first following, making a total penalty on the first installment of eight percent if not paid on or before June first in the year in which the tax became delinquent.~~

~~The second installment of mobile home tax shall become due on June first and shall become delinquent on the first day of July following and, if the second installment is not paid on or before that date, it shall be subject to a penalty of two percent, and on August first following an additional penalty of two percent, and on September first following an additional two percent, and on October first following an additional two percent, making a total penalty on the second installment of eight percent if not paid on or before October first in the year in which the tax became delinquent.~~

~~If any tax due from a mobile home owner remains unpaid after January first of the year following the year in which it became due, interest shall be charged and collected at the monthly rate of one-half percent of the amount of tax due and unpaid for each month or fraction thereof until the aforesaid tax and penalty have been paid in full, the interest shall be charged beginning with the month of January of the year following the year in which the tax became due. As applied to unpaid mobile home taxes for the year 1979 and for years before and after 1979, interest shall be charged on all unpaid taxes assessed for any year or part of a year, including years prior to the year 1979, but no interest shall be charged and collected for any month prior to July 1979, on unpaid taxes assessed for any year prior to 1979, for example, interest shall be charged and~~

~~collected beginning with the month of July 1979, on unpaid taxes for the year 1978 and any prior year. On unpaid taxes for the year 1979, interest shall be charged and collected beginning with the month of January 1980, and on unpaid taxes for the year 1980 and any year thereafter interest shall be charged and collected beginning with the month of January of the year following the year in which the unpaid tax became due.~~

General Authority: ~~NDCC 57-55-09~~
Law Implemented: ~~NDCC 57-55-03~~

Repealed effective October 1, 1982.

81-02-02-28. Discount. ~~If the mobile home tax due for the entire year is paid in full on or before February fifteenth, the county treasurer shall allow a five percent discount. A five percent discount shall also be allowed by the county treasurer if a mobile home is purchased, acquired, or moved into this state after January tenth and if the mobile home tax imposed thereon is paid in full within ten days after it is purchased, acquired, or moved into this state.~~

General Authority: ~~NDCC 57-55-09~~
Law Implemented: ~~NDCC 57-55-03~~

Repealed effective October 1, 1982.

81-02-02-31. No refund or credit for sale or other disposition during the year. If a tax is levied by the county director of tax equalization on a mobile home for a particular year pursuant to the mobile home tax law and the person to whom it was taxed thereafter disposes of the mobile home during the same year, no part of the tax shall be refunded or abated, except as provided in North Dakota Century Code sections ~~81-02-02-32 through 81-02-02-35~~ 57-55-04.1 and 57-55-12.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-12

81-02-02-32. Refund when mobile home is moved to another state and taxed there. ~~If the owner of any mobile home has paid the full amount of tax due under the mobile home tax law and thereafter during the current year permanently removes it from this state to any other state of the United States in~~

which the owner is required to pay a tax or fee on it that is substantially the same as that imposed by the North Dakota mobile home tax law, the owner shall, upon written proof that the owner has paid another tax or fee, be granted a refund of a part of the tax paid in North Dakota under the mobile home tax law, but such refund shall not include any penalties paid.

The county director of tax equalization shall compute the refund by dividing the total amount of the tax paid in North Dakota on the mobile home by the number of months of the year for which it was paid and then multiplying the quotient by the number of calendar months remaining in the year to determine the amount of the refund. The number of calendar months remaining in the year shall be determined by reference to the date the mobile home was permanently removed from this state or the date the mobile home was subjected to a similar tax in another state, whichever date is later. Fractions of a month shall be disregarded in computing any refund.

Application forms for refunds shall be furnished by the county director of tax equalization upon request of any mobile home owner who has paid the tax. Upon receiving an application for refund, the county director of tax equalization shall determine whether the mobile home owner is entitled to a refund, and the director shall then determine the correct amount of refund and approve the refund for payment. The approved application shall be forwarded to the county treasurer for payment.

General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-12

Repealed effective October 1, 1982.

81-02-02-33. Correction of errors. If, through mistake or otherwise, the mobile home owner has paid more tax or penalty than was properly due, the county director of tax equalization shall make the necessary corrections and notify the county treasurer to refund the portion of tax or penalty unjustly paid. The county auditor and county treasurer shall charge all refunds against the taxing districts to which the collections were credited.

General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-12

Repealed effective October 1, 1982.

81-02-02-34. Demolished or destroyed by fire, windstorm, or flood. If the owner of a mobile home has paid the full amount of taxes due under the mobile home tax law, and thereafter during the current year such mobile home has been demolished or destroyed beyond repair by fire, windstorm, or flood, the owner shall be entitled to a refund as set forth in section 81-02-02-32.

General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-12

Repealed effective October 1, 1982.

81-02-02-35. Abatement of taxes assessed on mobile homes.

1. Who May Apply. Any person who has any estate, right, title, or interest in or lien upon any mobile home which has been assessed for taxation purposes pursuant to the provisions of the mobile home tax law may apply for abatement or compromise of the tax levied upon that mobile home pursuant to the provisions of North Dakota Century Code chapter 57-23.

2. Application for Abatement or Compromise - Procedure. A person desiring an abatement or compromise of taxes on that person's mobile home shall file, in triplicate, an application with the county auditor of the county where the mobile home was assessed within six months after the tax imposed by the provisions of North Dakota Century Code chapter 57-55 becomes due, or at any time during the taxable year that the mobile home qualifies under the provisions of North Dakota Century Code section 57-55-10 relating to exemptions from taxation.

3. County Auditor's Duties. Upon receipt of the application for abatement, the county auditor shall promptly serve the county director of tax equalization with one copy. The second copy shall be acknowledged and verified and returned to the person seeking the abatement or compromise, and the original application shall be retained by the county auditor, who shall note the date of filing and file the same. The county auditor shall present the application to the board of county commissioners at its next regular meeting. The county auditor shall give the applicant notice by mail of the time and place of hearing on any

abatement or refund not less than ten days prior to such hearing as pursuant to the provisions of North Dakota Century Code section 57-23-05.

4. Situations Where Abatement or Compromise Shall be Granted. Abatement or compromise shall be granted by the county commissioners if:

a. The facts upon which the assessment is based establish that the assessment contains error;

b. The mobile home is exempt from taxation pursuant to the provisions of North Dakota Century Code section 57-55-10 pertaining to exemptions; or

c. Either the assessed or market value placed upon the mobile home by the county director of tax equalization was excessive.

5. Review of the County Commissioners' Decisions - North Dakota Tax Appeals Board. A mobile home owner may appeal the county commissioners' decision to an abatement to the North Dakota tax appeals board pursuant to the provisions of North Dakota Century Code chapter 57-23.1.

General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-04.1

Repealed effective October 1, 1982.

81-02-02-37. Duties of mobile home park owners, operators, managers, and mobile home dealers. It shall be the duty of the owner, operator, or manager of each mobile home park or lot and of each mobile home dealer to display in the owner's, operator's, or manager's office, in a conspicuous place, a notice listing the provisions and requirements of the mobile home tax law. Such notice shall be subscribed by the tax commissioner and shall be furnished by the director of tax equalization to the county in which the owner, operator, or manager of the mobile home park or lot or the mobile home dealer resides. It shall be the duty of the owner, operator, or manager of each mobile home park or lot in each county to make an annual report on or before December first of each year to the director of tax equalization of such county. Such report shall list the number of mobile homes and the name of the owner of each mobile home which is located within such mobile home park or lot on the date of the report. It shall be the additional duty of the owner,

~~operator, or manager of each mobile home park or lot to furnish to the county director of tax equalization a quarterly report providing the name and date of arrival of each mobile home owner who was not listed on the annual report. Such quarterly reports shall be from January first through March thirty-first, first quarter; April first through June thirtieth, second quarter; July first through September thirtieth, third quarter; and from October first through December thirty-first, fourth quarter. Each quarterly report shall be furnished to the county director of tax equalization within fifteen days after the end of the quarter year period covered by it. Any person who refuses to make a required report shall, after the first offense, be guilty of an infraction.~~

General Authority: ~~NDCC 57-55-09~~
Law Implemented: ~~NDCC 57-55-08~~

Repealed effective October 1, 1982.

~~81-02-02-38. Enforcement duties of county director of tax equalization. The county director of tax equalization shall make inspections of each mobile home park, mobile home lot, or place where the mobile homes are known to be located, including each mobile home dealer's business location, for the purpose of determining if each mobile home owner, each owner, operator, or manager of the mobile home park or lot, and each mobile home dealer is complying with the provisions of the mobile home tax law. If the county director of tax equalization shall determine that any person is not complying with the provisions of the mobile home tax law, the director shall give such person a warning and inform the person that if the person fails to comply within ten days after issuance of such warning, civil action may be taken by the county director of tax equalization to enforce compliance, including the collection of any delinquent mobile home tax, penalties, and interest due thereon. (Also see section 81-02-02-39.)~~

~~If the county director of tax equalization shall determine that there is any mobile home in the director's county belonging to a transient or nonresident who has failed to comply with the provisions of the mobile home tax law and if in the director's opinion any mobile home tax due from such person will be uncollectible if immediate action is not taken, the director shall determine the amount of such tax if it was not previously determined and shall notify the county sheriff of the amount of tax and penalties due and that such amount shall be collected immediately. The county sheriff shall immediately, and in no event later than~~

~~five days after receiving such notification, commence proceedings as provided by law to collect the taxes, penalties, and interest, if any, that are due. The provisions of North Dakota Century Code chapter 57-22 for the immediate collection of delinquent personal property taxes shall be applicable for the collection of any such mobile home tax and penalty.~~

~~History: Amended effective September 1, 1979.~~
~~General Authority: NDCC 57-55-09~~
~~Law Implemented: NDCC 57-55-11~~

Repealed effective October 1, 1982.

81-02-02-39. Noncompliance by mobile home owner. A mobile home owner is not in compliance with the provisions of the mobile home tax law if the owner has not made application to the county director of tax equalization for a tax decal within the time required by the mobile home tax law. (See section 81-02-02-05.) A mobile home owner is not in compliance with the provisions of the mobile home tax law if the owner has made application to the county director of tax equalization for a tax decal but has not paid the tax or installments on it on or before the date the tax installments become due. Similarly, a mobile home owner is not in compliance if the owner has not paid all or any part of the penalty that has attached to a delinquent tax or installment of tax. ~~(See section 81-02-02-26.)~~ A mobile home owner is not in compliance with the provisions of the mobile home tax law if the owner does not have a tax decal attached to the owner's mobile home as provided in ~~sections~~ section 81-02-02-10 and ~~81-02-02-21~~ North Dakota Century Code section 57-55-06. ~~The owner of a taxable mobile home who moves it from its existing location is not in compliance with the provisions of the mobile home tax law if there is not displayed on the mobile home during the transport of it either a current year's mobile home tax decal or a tax release statement obtained from the county director of tax equalization indicating that all taxes, penalties, and interest levied against the mobile home have been paid, as provided in section 81-02-02-47.~~

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-07, 57-55-11

81-02-02-40. Warning and notice to mobile home owner for failure to comply. If a mobile home owner who is subject to the mobile home tax does not file an application for a mobile home tax decal with the county director of tax equalization within the time required by law, the county director of tax equalization shall, nevertheless, make an assessment on the basis of whatever information is available to the

director. Normally, the director will do this after a warning and notice has been given to the mobile home owner and after the mobile home owner has failed to comply within the ~~ten days~~ ten-day period specified in the warning and notice. If, however, the county director of tax equalization believes that any tax on a mobile home belonging to a transient or nonresident will be uncollectible if immediate action is not taken, the director shall proceed as provided in North Dakota Century Code section ~~81-02-02-38~~ 57-55-11 for the immediate collection of the tax and penalties, if any.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-07, 57-55-11

~~81-02-02-41. Noncompliance by the owner, operator, or manager of a mobile home park or lot. The owner, operator, or manager of a mobile home park or lot is not in compliance with the provisions of the mobile home tax law if the owner, operator, or manager:~~

~~1. Does not have displayed in the owner's, operator's, or manager's office, in a conspicuous place, the notice prescribed by the tax commissioner and furnished by the county director of tax equalization which lists the provisions and requirements of the mobile home tax law as required by North Dakota Century Code section 57-55-08, or~~

~~2. Does not make the annual written report to the county director of tax equalization or furnish any calendar quarterly report to the county director of tax equalization as required by North Dakota Century Code section 57-55-08.~~

~~(Also see section 81-02-02-37.)~~

~~General Authority: NDCC 57-55-09~~
~~Law Implemented: NDCC 57-55-08~~

Repealed effective October 1, 1982.

~~81-02-02-42. Noncompliance by mobile home dealer. A mobile home dealer is not in compliance with the provisions of the mobile home tax law if the dealer:~~

~~1. Does not have displayed in the dealer's office, in a conspicuous place, the notice prescribed by the tax commissioner and furnished by the county director of tax equalization which lists the~~

provisions and requirements of the mobile home tax law as required by North Dakota Century Code section 57-55-08, or

2. Has not made application for a mobile home tax decal for, or paid a mobile home tax when due on, or attached a mobile home tax decal to, any mobile home now held by the dealer solely for the purpose of resale but which is used as living quarters or as a place for the conducting of any business.

General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-08

Repealed effective October 1, 1982.

81-02-02-44. Criminal penalties. North Dakota Century Code section 57-55-07 provides as follows:

57-55-07. FAILURE TO MAKE APPLICATION OR TO DISPLAY DECAL - ILLEGAL USE OF DECAL - PENALTY. Any person who fails to make application pursuant to the provisions of this chapter, or who shall use or allow to be used a tax decal of any mobile home taxed pursuant to the provisions of this chapter for any purpose other than the purpose for which it was issued, or who fails to attach such decal pursuant to the provisions of this chapter, shall be guilty of a class B misdemeanor.

North Dakota Century Code section 57-55-08 provides the following penalty for refusal by the owner, operator, or manager of any mobile home park or lot to make the annual report or any calendar quarter report required by that section:

Any person who fails to make a report as required by this section shall be guilty of an infraction.

(Also see section 81-02-02-37.)

North Dakota Century Code section 57-55-11, subsection 2, provides that before a mobile home is moved from its existing location the mobile home owner must have a current year's mobile home decal displayed thereon or must display on the mobile home during transport a tax release statement obtained from the county director of tax equalization indicating that all taxes, penalties, and interest levied against the mobile home have been paid, and it further provides that a violation of this provision shall constitute

an infraction. (Also see sections 81-02-02-39 and 81-02-02-47.)

History: Amended effective September 1, 1979.
General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-07, 57-55-08, 57-55-11

Repealed effective October 1, 1982.

81-02-02-45. Tax exempt decal required. The following mobile homes are exempt from the mobile home tax, but an application for a tax exempt decal must be made by the owner of any such mobile home as provided in section 81-02-02-10.

1. A mobile home that is owned and used by a member of the armed services as the member's living quarters and who is on active duty in this state but is a resident of another state.

2. A mobile home that is owned and occupied by a welfare recipient who meets the requirements of subsection 2 of North Dakota Century Code section 57-02-21, provided the mobile home is not permanently attached to the land and classified as real property for taxation purposes.

3. A mobile home that is owned and used by a disabled veteran or his unremarried widow as living quarters, provided that such veteran or unremarried widow meets the requirements of subsection 20 of North Dakota Century Code section 57-02-08, but such exemption shall be limited to the amount provided in that subsection.

4. A mobile home that is owned and used as the living quarters for a blind person who meets the requirements of subsection 22 of North Dakota Century Code section 57-02-08.

5. A mobile home that is owned and used by a person who uses it as the person's living quarters and who qualifies for the homestead credit provided in North Dakota Century Code section 57-02-08.1, such mobile home shall be regarded for the purposes of this exemption as the homestead of the person claiming the exemption, but such exemption shall be limited to the amount provided in that Code section.

General Authority: NDCC 57-55-09

Law Implemented: ~~NDCC 57-55-10~~

Repealed effective October 1, 1982.

81-02-02-46. Mobile homes not subject to mobile home tax or decal requirements. ~~The following mobile homes are not subject to the provisions of the mobile home tax law and the owners thereof are not required to make an application for a decal:~~

~~1.~~ A mobile home that is used only for the temporary living quarters of the owners or other occupants while such persons are engaged in recreational or vacation activities, that requires movement on the streets or highways of this state, provided that such unit displays a current travel trailer license issued by the North Dakota motor vehicle registrar as provided in North Dakota Century Code section 39-18-03.

~~2.~~ A mobile home located on a farm and used as a farm residence as described in subsection 15 of the North Dakota Century Code section 57-02-08 provided such mobile home is permanently attached to the ground.

~~3.~~ A mobile home that is permanently attached to a foundation and that is assessed as real property for taxation purposes, provided the owner of such mobile home also owns the land on which the mobile home is located.

~~4.~~ Any mobile home owned by a licensed mobile home dealer who holds it solely for the purpose of resale, provided that any such mobile home is not used as living quarters or as the place for the conducting of any business.

General Authority: ~~NDCC 57-55-09~~
Law Implemented: ~~NDCC 57-55-10~~

Repealed effective October 1, 1982.

81-02-02-48. Exemptions for welfare recipients. The term "meets the requirements of section 57-02-21", found in subdivision b of subsection 1 of section 57-55-10 of the North Dakota Century Code, means that the owner-occupant receives a major part of the owner-occupant's income from any state or federal public assistance program and the

owner-occupant's name is certified to the county auditor by the county social service board.

History: Effective October 1, 1982.
General Authority: NDCC 57-55-09
Law Implemented: NDCC 57-55-10(1)(b)

81-04-01-01. Nature of retail sales tax. The retail sales tax is a tax imposed at the rate of three percent on the gross receipts of retailers derived from all sales at retail within the state of North Dakota of the following tangible personal property and services to users or consumers:

1. Tangible personal property, consisting of goods, wares or merchandise. (See section 81-04-02-32.)

2. Sales, furnishing or service of steam, gas~~,~~ **~~water~~**, and communication services. (See section 81-04-02-32.)

3. Charges for participation in or tickets or admissions to places of amusement, entertainment, or athletic events, including the playing of any machine for amusement or entertainment in response to a coin. (See sections 81-04-02-63, 81-04-02-64, 81-04-02-65, 81-04-02-66, and 81-04-02-73.)

4. Magazines~~,~~ and periodicals~~,~~ **~~and subscriptions thereto~~**. (See section 81-04-02-16.)

5. Leasing or renting of hotel, motel, or tourist court accommodations for periods less than thirty consecutive calendar days or one month. (See section 81-04-02-70.)

6. The leasing or renting of tangible personal property the transfer of title to which has not been subject to a retail sales tax under North Dakota Century Code chapter 57-39.2 or use tax under the provisions of North Dakota Century Code chapter 57-40.2. (See sections 81-04-02-32 and 81-04-02-33.)

The seller is liable for the tax whether or not the seller complies with the law requiring said tax to be passed onto the consumer. The tax is not imposed upon the article or service sold, but it is a tax on the gross receipts derived from the transaction called the "sale".

History: Amended effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-03.2, 57-39.2-03.3, 57-39.2-08.2

81-04-01-03. Sales tax permit required - Bond requirement. A retail sales tax permit must be procured by every person before engaging

in the business of selling tangible personal property, including magazines and periodicals ~~or subscriptions thereto~~, steam, gas, ~~water~~ or communication service at retail; charges for participation in or tickets or admissions to places of amusement and athletic events or operating coin-operated amusement or entertainment devices; leasing or renting of tangible personal property and the leasing or renting of hotel, motel, or tourist court accommodations. Application for such permit shall be made upon a form prescribed by the tax commissioner and shall be signed by the owner of the business if a natural person, in the case of an association or partnership by all members or partners thereof, or in the case of a trust by all trustees, or in the case of a corporation by an executive officer thereof or some person specifically authorized by the corporation to sign the application, in which case written evidence of the signer's authority must be attached to the application.

A permit shall be held for each separate business location. ~~Doing~~ An individual doing business without a sales tax permit is guilty of a class A misdemeanor punishable by a maximum penalty of one year's imprisonment, a fine of one thousand dollars, or both. A corporation doing business without a sales tax permit is guilty of a class A misdemeanor punishable by a maximum fine of fifteen thousand dollars.

The permit must be posted conspicuously at the place for which it is issued. Any "transient merchant" who is in the business of soliciting or making sales at retail to consumers shall, before soliciting such a sale from a consumer, exhibit to the consumer or prospective consumer the retail sales tax permit issued to the merchant.

"Transient merchant" means any person, individual, copartnership or corporation, either as principal or agent, who solicits, engages in, does, or transacts any temporary or transient business in North Dakota, either in one locality or in traveling from place to place in the state, selling goods, wares, and merchandise, who does not intend to become, and does not become a permanent merchant of such place, and who, for the purpose of carrying on such business, hires, leases, occupies, or uses a building, structure, lot, tract, railroad car, motor vehicle, or display or sample case of any kind for the exhibition and sale of such goods, wares, and merchandise.

Upon proper application and upon determining that the applicant is or will be a bona fide retailer, a permit shall be issued to the applicant for each place of business within North Dakota without charge. The fee for the issuance of a sales tax permit to a retailer whose permit has been previously revoked shall be fifty dollars.

The tax commissioner, when in the commissioner's judgment it is necessary and advisable to do so in order to secure the collection of the tax levied under North Dakota Century Code chapter 57-39.2 may require any person subject to such tax to file with the tax commissioner a bond, issued by a surety company authorized to transact business in this state and approved by the insurance commissioner as to solvency and responsibility in such amount as the tax commissioner may fix, to secure

the payment of any tax and penalties due or which may become due from such person. In lieu of such bond, securities approved by the tax commissioner in such amounts as the tax commissioner may prescribe may be deposited with the tax commissioner, which securities shall be kept in the custody of the tax commissioner and may be sold by the tax commissioner at public or private sale, without notice to the depositor thereof, if it becomes necessary to do so in order to recover any tax and penalties due.

A sales tax permit cannot be issued to a person not engaged in a retail business and cannot be issued to a person solely for the purpose of permitting the person to buy at wholesale or to buy without payment of sales tax to the seller of property or services taxable under the sales tax law.

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-03.2, 57-39.2-03.3, 57-39.2-12, 57-39.2-14, 57-39.2-18, 57-39.2-20

81-04-01-06. Gross receipts defined. Gross receipts means the entire gross amount of sales (both cash and charge) of retailers from the sale of tangible personal property or taxable services, valued in money, whether received in money or otherwise, exclusive of discounts allowed and taken on such sales. Discounts shall include certain coupons, cash, or trade discounts. Provided, that when sales are made under conditional sales contract or under other forms of sale wherein the payment of the principal sum thereunder shall be extended over a period longer than sixty days from the date of sale, only such portion of the sale amount that has actually been received during the quarterly period covered by the return need be included in gross receipts. The term "sale" also includes leasing and renting tangible personal property. The term "sale" also includes retail sale of magazines and includes the sale of tangible personal property through coin-operated vending machines if the sale price is sixteen cents or more. (See section 81-04-02-32.)

History: Amended effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01

81-04-01-14. Tangible personal property defined. Under the use tax law, tangible personal property means tangible goods, wares, merchandise, and gas ~~and water~~, when furnished or delivered to consumers or users within this state, as well as tangible personal property leased for use within this state or when purchased outside of this state and used or operated by the owner or lessee thereof within this state.

Tangible personal property also means magazines and other periodicals~~, including subscriptions thereto, regardless of~~

~~whether or not such magazines and subscriptions are to be delivered in the future and regardless of whether or not they are in existence at the time of the purchase of any subscription~~. The words "magazine and other periodicals" do not include newspapers, nor do they include magazines or periodicals that are furnished free by a nonprofit corporation or organization to its members or because of payment by its members of membership fees or dues. Tangible personal property also includes the severance of sand and gravel from the soil.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-40.2-13
Law Implemented: NDCC 57-40.2-01

81-04-01-15. Purchase price defined. The purchase price of any tangible personal property means the total sales price or amount for which such property is sold valued in money, whether paid in cash or otherwise, less discounts and trade-ins allowed and taken.

Purchase price also means the total consideration received during a taxable period from the leasing or renting of tangible personal property.

Purchase price also means the total cost of the materials and supplies used in the fabrication, compounding, or manufacturing of tangible personal property by a person for storage, use, or consumption in this state by that person.

Purchase price also includes the receipts from the sale of magazines and other periodicals ~~or subscriptions thereto, regardless of whether or not the magazines, periodicals, or subscriptions thereto are to be delivered in the future and regardless of whether or not they are in existence at the time of the purchase of any subscription~~.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-40.2-13
Law Implemented: NDCC 57-40.2-01

81-04-02-01. Peddlers and transient or itinerant merchants or vendors. Peddlers and transient and itinerant merchants or vendors selling tangible personal property, including magazines, and periodicals, ~~and subscriptions thereto,~~ at retail to users or consumers, irrespective of the method of making such sales, whether door-to-door canvass, salesrooms, or telephone, are retailers and must procure a sales tax permit and collect the tax and remit it to the state.

Where peddlers or vendors sell from a truck or trucks, a sales tax permit must be procured for each such truck and displayed conspicuously on each truck. In case such peddlers or vendors walk about selling

merchandise subject to the sales tax, the sales tax permit must be displayed in the sample case or merchandise case of the vendor.

Persons selling at retail other than from an established place of business are required, at the discretion of the tax commissioner, and as a condition precedent to obtaining a sales tax permit, to post with the tax commissioner a suitable bond payable to the state of North Dakota, conditioned on the retailer's full compliance with the sales tax law and regulations. In lieu of such a bond a cash deposit may be accepted at the discretion of the commissioner.

History: Amended effective October 1, 1982
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-03.2, 57-39.2-03.3, 57-39.2-12, 57-39.2-14, 57-39.2-20

81-04-02-04. Exemptions and deductions. From the total amount of gross receipts of the retailer, the following exemptions and credits may be deducted on the sales tax return, but the items must be itemized and explained on the return or supporting schedules:

1. Sales to the United States government or to certain of its agencies, departments, or instrumentalities. (See sections 81-04-02-07 and 81-04-02-08.)

2. Sales to the state of North Dakota, other states of the United States, or any of the subdivisions, departments, agencies, or institutions thereof, including any county, city, township, school district, park district, or municipal corporation. (See section 81-04-02-10.)

3. Sales of drugs to be used as part of a feed ration. Effective July 1, 1971. (See section 81-04-02-12.)

4. Sales of gasoline. (See section 81-04-02-11.)

5. Sales in interstate commerce. (See section 81-04-02-28.)

6. Sales of tangible personal property for processing. (See sections 81-04-02-05 and 81-04-02-06.)

7. Sales of tangible personal property for resale. (See section 81-04-02-25.)

8. Refunds or returned merchandise and repossessions. (See sections 81-04-02-24 and 81-04-02-93.)

9. Bad debts. (See section 81-04-02-24.)

10. Sales of livestock, poultry, draft, or fur-bearing animal feeds. (See section 81-04-02-12.)

11. Sales of commercial fertilizers, fungicides, seed treatments, inoculants and fumigants, herbicides, and insecticides, and seeds for planting. (See sections 81-04-02-13 and 81-04-02-14.)

12. Sales of newspapers. (See section 81-04-02-16.)

13. Sales of service. (See section 81-04-02-17.)

14. Sales of drugs sold under a doctor's prescription. (See section 81-04-02-42.)

15. Sales of oxygen for medical purposes upon the written order of a doctor. (See section 81-04-02-42.)

16. Sales of textbooks to regularly enrolled students of a private or public school and (effective July 1, 1971) sales of textbooks, yearbooks, and school supplies purchased by a private, nonprofit elementary or secondary school or institution of higher learning conducting courses of study similar to those conducted by public schools in this state. (See section 81-04-02-19.)

17. Gross receipts from the sale, furnishing, or service of passenger transportation service and gross receipts from the sale, furnishing, or service of freight transportation service when provided by a common carrier and title to the transported tangible personal property has passed from the seller to the purchaser. (See section 81-04-02-76.)

18. Any sale of tangible personal property selling for fifteen cents or less when sold through a coin-operated vending machine. (See section 81-04-02-73.)

19. Sales of newsprint and ink used in the publication of a newspaper. (See section 81-04-02-16.)

20. Sales of services furnished by a hospital, infirmary, sanitarium, nursing home, or home for the aged. (See sections 81-04-02-43 and 81-04-02-44.)

21. Certain sales made to residents of Montana ~~(effective April 1, 1967)~~ and certain sales to residents of Canada ~~(effective July 1, 1971)~~. (See section 81-04-02-28.)

22. Sales made to contractors furnishing to seller a certificate containing use tax account number and contractor's license number. (See section 81-04-02-48.)

23. Sales of tickets or admissions to state, county, district, and local fairs (see section 81-04-02-64); gross receipts from educational, religious, or charitable activities unless such activities are held in a publicly owned facility (see section

81-04-02-21); and, effective July 1, 1971, gross receipts derived by public school districts (see section 81-04-02-22).

24. Leasing or renting of mobile homes for residential housing for periods of more than thirty consecutive days. Effective July 1, 1971. (See section 81-04-02-33.)

25. Sales of any motor vehicle taxable under the provisions of motor vehicle excise tax laws of North Dakota. (See sections 81-04-02-33 and 81-04-02-57.)

26. Sales of food supplies to schools. (See sections 81-04-02-67 and 81-04-02-68.)

27. Leasing of motion picture film to motion picture exhibitors for exhibition if the sale of tickets or admissions to the exhibition of the film is subject to the sales tax. (See section 81-04-02-33.)

28. Sales for human consumption of food and food products when purchased by consumers for consumption off the premises where purchased. (See section 81-04-02-105.)

29. Sales of food to a student under a boarding contract with a college, university, fraternity, or sorority. Effective July 1, 1971. (See sections 81-04-02-20 and 81-04-02-69.)

30. Sales for final use to any credit union organized under the North Dakota law or under the Federal Credit Union Act.

31. Gross receipts from all sales made to any skilled nursing facility or intermediate care facility licensed by the state department of health (effective July 1, 1975), boarding homes for the aged and infirm licensed by the social service board of North Dakota, (effective July 1, 1977), and hospitals licensed by the state department of health (effective July 1, 1979).

32. Gross receipts from the sale of Bibles, hymnals, textbooks, and prayer books sold to nonprofit religious organizations. Effective July 1, 1975. (See section 81-04-02-97.)

33. Gross receipts from sales of:

    a. Artificial devices individually designed, constructed, or altered solely for the use of a particular crippled person so as to become a brace, support, supplement, correction, or substitute for the bodily structure including the extremities of the individual.

    b. Artificial limbs, artificial eyes, hearing aids, and other equipment worn as a correction or substitute for any functioning portion of the body.

c. Artificial teeth sold by a dentist.

d. Eyeglasses when especially designed or prescribed by an ophthalmologist, physician, oculist, or optometrist for the personal use of the owner or purchaser.

e. Crutches and wheelchairs for the use of invalids and crippled persons. Effective July 1, 1975. (See sections 81-04-02-39, 81-04-02-40, 81-04-02-41, and 81-04-02-42.)

f. Devices and supplies designed or intended for ostomy care and management to include collection devices, colostomy irrigation equipment and supplies, skin barriers or skin protectors, and other supplies especially designed for use of ostomates.

g. Equipment, including manual control units, van lifts, van door opening units, and raised roofs, for attaching to or modifying a motor vehicle for use by a permanently physically disabled person.

h. Equipment, including elevators, dumb waiters, chair lifts, and bedroom or bathroom lifts, whether or not sold for attaching to real property, for use by a permanently physically disabled person in that person's principal dwelling.

i. Equipment, including manual control units, for attaching to or modifying motorized implements of husbandry for use by a permanently physically disabled person.

34. Gross receipts from the sale of coal mined in North Dakota. Effective July 1, 1975. (See section 81-04-02-79.)

35. Gross receipts from sales of electricity. Effective January 1, 1977.

36. Gross receipts from the sales of meals, including containers, packages, and materials used for wrapping food items, to nonprofit meal delivery organizations for delivery to shut-ins. Effective July 1, 1977.

37. Gross receipts from the leasing or renting of any tangible personal property under a finance leasing agreement upon which a North Dakota sales or use tax has been paid or is payable. Effective July 1, 1977. (See subsection 3 of section 81-04-02-33.)

38. Gross receipts from all sales of recreational travel trailers not exceeding eight feet [2.44 meters] in width or thirty-two feet [9.75 meters] in length which are designed to be principally used as temporary vacation dwellings when made to persons who are residents of other states which impose excise

taxes upon registration of such recreational travel trailers. Effective July 1, 1977.

39. Materials which, by contract, are to be incorporated into or attached to real property situated outside of North Dakota.

40. Sale and in-state delivery by a North Dakota wholesaler or distributor to an out-of-state retailer who does not hold a North Dakota retail sales tax permit.

41. Gross receipts from sales to certain nonprofit voluntary health associations. (See section 81-04-02-120.)

42. Gross receipts from sales of money including legal tender coins and currency. (See section 81-04-02-118.)

43. Gross receipts from all sales of water.

44. Gross receipts from sales of used mobile homes. (See section 81-04-02-116.)

45. Gross receipts from sales of subscriptions to magazines and periodicals. (See section 81-04-02-16.)

46. Gross receipts from sales of insulin; glucose usable for treatment of insulin reactions; urine and blood testing kits and material; and insulin measuring and injecting devices. (See section 81-04-02-119.)

47. Gross receipts from sales of supplies, equipment, and devices to be used exclusively by a person with bladder dysfunction.

48. Gross receipts from the sale of byproducts, arising from the processing of agricultural products, for use in the manufacture or generation of steam or electricity.

49. Gross receipts from the furnishing or service of steam when used for processing agricultural products.

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-03.2, 57-39.2-03.3, 57-39.2-04, 57-39.2-04.1

81-04-02-08. Sales by or to the United States government. Sales of tangible personal property or furnishing or service of steam, gas, ~~water,~~ and communication service or any other service or accommodation or amusement otherwise taxable, made directly by or to the United States government or certain agencies, departments, or instrumentalities under federal control are not subject to the sales tax. For example, sales to a United States post office, a United States veteran's hospital, the United States army engineers, the American national red cross, and the

reclamation service are exempt from the sales tax. Sales at retail made directly to patients, inmates, or employees of an institution or department of the United States government are subject to the sales tax since not made directly to the government. However, sales similarly made by post exchanges and other establishments organized and controlled by federal authority are not subject to the sales tax. (See sections 81-04-02-03 and 81-04-02-07.)

Sales to a contractor which involve installation of materials under a construction contract with the United States government may be taxable to the contractor or installer. (See sections 81-04-02-48 and 81-04-02-49.)

History: Amended effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-03.2, 57-39.2-03.3, 57-39.2-04

81-04-02-10. Sales to the state of North Dakota, other states, any subdivisions of the state of North Dakota or other states, and sales by municipal corporations. The gross receipts from sales of tangible personal property or from furnishing or service of steam, gas, ~~water,~~ communication service, or any other service otherwise taxable, made to the state of North Dakota or to any other state or any of the subdivisions, departments, agencies, or institutions of the state of North Dakota or of any state, are specifically exempt from sales tax.

Any city, township, school district, park district, or municipal corporation, including a city or county housing authority created pursuant to North Dakota Century Code chapter 23-11 and including urban renewal agencies are regarded as subdivisions, departments or institutions of the state of North Dakota and, hence, exempt from the sales tax on purchases made by them.

Retail sales to the public by the state of North Dakota or any other state, or subdivisions, departments, or institutions of the state of North Dakota or any other state, of tangible personal property, steam, gas, ~~water,~~ communication service, and other taxable services, accommodations, or amusement are subject to the sales tax.

Sales to a contractor which involve installation of materials under a construction contract with the state of North Dakota, other states, and political subdivisions, may be taxable to the contractor or installer. (See sections 81-04-02-48 and 81-04-02-49.)

History: Amended effective October 1, 1982.
General Authority: NDCC 57-39.2-19, 57-40.2-13
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-03.2, 57-39.2-03.3, 57-39.2-04

81-04-02-105. Food and food products for human consumption. Effective July 1, 1973, the gross receipts from sales of food and food products for human consumption are exempt from North Dakota sales tax when such products are purchased by consumers for consumption off the premises where purchased.

Food and food products shall include but shall not be limited to cereal and cereal products, butter, cheese, milk and milk products, oleomargarine, meat and meat products, poultry, fish, and other fresh and saltwater animal products, eggs and egg products, vegetable products, fruit and fruit products, spices, salt, sugar products including candy and confectionary products, chewing gum, coffee and coffee substitutes, tea, cocoa and cocoa products, and carbonated beverages.

Food and food products shall not include any alcoholic beverages or mixed drinks made therefrom, ~~bottled water,~~ medicines or preparations sold as dietary supplements, and such obvious nonfood products as paper and tin products, cigarettes and tobacco, cleaning supplies, cosmetics, light bulbs, detergents, and disinfectants, and products for nonhuman consumption such as pet food and bird seed.

Candy, confectionary, breath mints, and nonmedicated chewing gum are included within the definition of food products for human consumption and are exempt from sales tax when purchased for consumption off the premises where purchased. These same products sold at a theater concession stand, a bar or tavern, ballpark concession stands and other places where the products will be immediately consumed on or near the premises remain taxable. Any chewing gum containing aspirin, laxative, or other medication is not a food product and is, therefore, subject to the tax.

Sales of meals and other sales of food products prepared for immediate consumption on or near the premises of the seller shall remain subject to the sales tax. Sales of these food products are taxable sales even though such products are sold on a "take-out" or "to go" order by restaurants, drive-ins, etc., and are actually packaged or wrapped and taken from the premises. Examples of food products which are considered to be sold for "immediate consumption" includes sales by street vendors such as popcorn carts or stands, sales from lunch carts in an industrial plant or on job sites, sales of food products including soft drinks from vending machines, sales at carnivals or fair concessions, sales by vendors at athletic events, and sales by restaurants, cafes and drive-ins.

When a package contains both food and nonfood products, such as a child's sandpail containing nesting material and a few ounces of Easter candy or an ice bucket containing cheese samples or a woven basket filled with fruit, then the value of the nonfood product must be compared with the value of the food product to determine if the total package shall be exempt or shall be subject to the North Dakota sales tax. If the value of the nonfood item exceeds fifty percent of the total selling price, then the entire sale shall be subject to the tax.

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-04.1

81-04-02-116. Mobile homes - ~~Sale and rental~~ Sales and rentals. ~~Persons engaged in the business of selling or leasing factory-manufactured homes, including mobile homes, modular living units, or sectional homes, are generally subject to sales tax on the gross receipts derived from such sales or leases. Factory-manufactured homes are considered to be tangible personal property as opposed to real estate and are, therefore, subject to the retail sales tax. If the manufacturer or seller of such factory-manufactured homes also permanently attaches such homes to a foundation, the manufacturer or seller will be treated as a construction contractor and will be liable for tax based on the cost of materials to that manufacturer or seller. (See sections 81-04-02-48 and 81-04-02-49.)~~

~~1.~~ ~~Trade-ins. Persons engaged in the sale of factory-manufactured homes often accept trade-ins of other homes, vehicles, and other tangible personal property. These trade-ins are to be deducted from the gross sales prior to application of the sales tax, provided that the property being traded in has been or will be subject to either the sales tax imposed by North Dakota Century Code chapter 57-39.2 or the motor vehicle excise tax imposed by North Dakota Century Code chapter 57-40.3.~~

~~2.~~ ~~Leasing or renting of mobile homes for residential purposes. Leasing or renting of mobile homes for residential housing for periods of more than thirty consecutive days is exempt from sales tax. However, the leasing or renting of mobile homes for other than residential housing is subject to sales tax, regardless of the period of time during which the home is rented. If a mobile home dealer uses a mobile home as an office, the cost of that mobile home to the dealer becomes subject to sales or use tax.~~

~~3.~~ ~~Real estate brokers - resale of used mobile homes. Licensed real estate brokers may sell, buy, solicit prospective purchases of, solicit or obtain listings of, or negotiate the purchase, sale, or exchange of any mobile home if the mobile home has been registered under the provisions of North Dakota Century Code chapter 39-18 for at least two years. No real estate broker shall maintain a place of business where two or more mobile homes~~

~~are displayed and offered for sale, unless the broker is also licensed as a mobile home dealer.~~

The gross receipts from the sales of new mobile homes are subject to sales tax at the selling price of such homes. Effective July 1, 1981, the sales of new mobile homes are subject to a two percent sales tax rate rather than the three percent general sales tax rate. Sales of used mobile homes after July 1, 1981, will be completely exempt from the sales tax. For purposes of defining a mobile home, they shall be regarded as "any non-self-propelled vehicular structure built on a chassis having a length of twenty-seven feet [8.23 meters] or more, ordinarily designed for human living quarters, either on a temporary or permanent basis, and used as a residence or place of business of the owner or occupant". Under this definition modular homes and other factory manufactured homes not generally recognized as "mobile homes" will remain subject to the three percent general sales tax rate. (See section 81-04-02-117.)

1. Trade-ins of mobile homes. Because used mobile homes will not be subjected to sales tax after July 1, 1981, no trade-in allowance will be allowed on the sale of a new mobile home for sales tax purposes. The reduced two percent sales tax rate on new mobile homes will apply on the complete selling price of the new mobile home without regard for trade-in allowance.

2. Leasing or renting of mobile homes. The leasing or renting of mobile homes for residential purposes for periods of more than thirty consecutive days is specifically exempt from sales tax. However, the leasing or renting of mobile homes for other than residential housing is subject to sales tax regardless of the period of time during which the home is rented. If a mobile home dealer uses a mobile home as an office, the dealer must pay sales or use tax based on the dealer's cost of that mobile home. Sales tax should be applied on the lease or rental of a new mobile home at the reduced rate of two percent and no sales or use tax is applied to the lease or rental of a used mobile home after July 1, 1981, since sales of used mobile homes are exempt after that date.

3. Real estate brokers - Resale of used mobile homes. Licensed real estate brokers may sell, buy, solicit prospective purchases of, solicit or obtain listings of, or negotiate the purchase, sale, or exchange of any mobile home if the mobile home has been registered under the provisions of North Dakota Century Code chapter 39-18 for at least two years. No real estate broker shall maintain a place of business where two or more mobile homes are displayed and offered for sale, unless the broker is also licensed as a mobile home dealer. No real estate broker must charge sales tax on the sales of used mobile homes since such sales became exempt on July 1, 1981.

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-39.2-19

Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-04

81-04-02-117. Factory manufactured homes. Persons engaged in the business of selling or leasing factory manufactured homes, including modular living units or sectional homes are generally subject to sales tax on the gross receipts derived from such sales or leases. Factory manufactured homes are considered to be tangible personal property as opposed to real estate and are, therefore, subject to the retail sales tax. If the manufacturer or seller of such factory manufactured homes also permanently attaches such homes to a foundation, the manufacturer or seller will be treated as a construction contractor and will be liable for tax based on the cost of materials to that manufacturer or seller. (See sections 81-04-02-48 and 81-04-02-49.)

Persons engaged in the sale of factory manufactured homes often accept trade-ins of other factory manufactured homes, vehicles, and other tangible personal property. These trade-ins are to be deducted from the gross sales prior to application of the sales tax; provided, that the property being traded in has been or will be subject to either the sales tax imposed by North Dakota Century Code chapter 57-39.2 or the motor vehicle excise tax imposed by North Dakota Century Code chapter 57-40.3. The trade-in of a used mobile home may not be deducted from the gross sales since used mobile homes are exempt from sales or use tax effective July 1, 1981. Other items which will not be subjected to the North Dakota sales or use tax such as livestock will also not be considered as an acceptable trade-in.

Leasing or renting of factory manufactured homes for residential housing for periods of more than thirty consecutive days is exempt from sales tax. The leasing or renting of factory manufactured homes for purposes other than residential housing is subject to sales tax regardless of the period of time during which the home is rented.

Licensed real estate brokers may sell, buy, solicit prospective purchases of, solicit or obtain listings of, or negotiate the purchase, sale, or exchange of any factory manufactured home. Real estate brokers who sell factory manufactured homes which are not permanently affixed to foundations must collect retail sales tax on the selling price of such factory manufactured homes.

History: Effective October 1, 1982.
General Authority: NDCC 57-39.2-01
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-04

81-04-02-118. Sales of legal tender coins and currency. Effective July 1, 1981, the gross receipts from sales of money including all legal tender coins and currency are exempt from North Dakota sales tax. Sales of coins and currency issued by the United States government as legal tender will be exempt from North Dakota sales tax. In addition, coins or currency issued as legal tender by foreign nations would also be exempt. Sales of gold or silver bullion, bars, ingots, or

other sales of precious metal not issued as legal tender by the United States government or any foreign government will be regarded as subject to sales tax if sales of these products takes place within the state of North Dakota.

History: Effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-04

81-04-02-119. Diabetic supplies and bladder dysfunction supplies. Effective July 1, 1981, the gross receipts from sales of supplies necessary for diabetes management and for the care and management of bladder dysfunctions are exempt from sales tax.

Supplies necessary for diabetes management will include all sales of insulin in all of its forms dispensed pursuant to the direction of a licensed physician as well as all sales of glucose usable for treatment of insulin reactions, sales of urine and blood testing kits and materials, and all sales of insulin measuring and injecting devices, including insulin syringes and hypodermic needles.

Supplies necessary for the care and management of bladder dysfunctions shall include catheters, collection devices, incontinent pads and pants, tubing, connectors and adaptors, shutoff valves, other flow control devices, adhesives, tape, skin protectives, adhesive removers, cleansers, disinfectants, and deodorants.

The gross receipts on the items above are exempt only if sold to and used exclusively by a person with bladder dysfunction or a person who suffers from diabetes.

History: Effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-04

81-04-02-120. Sales to nonprofit voluntary health associations. Effective July 1, 1981, the gross receipts from sales to nonprofit voluntary health associations are exempt from sales tax. For purposes of this exemption, a nonprofit voluntary health association is an organization recognized by the United States internal revenue service, the national health council, the state tax commissioner, and the North Dakota secretary of state as a nonprofit organization which is exempt from federal income tax under section 501(C)(3) of the United States Internal Revenue Code [26 U.S.C. 501(C)(3)]. These organizations also must meet the following requirements: it must have been organized and operated exclusively in providing services for the purposes of preventing or alleviating human illness and injury; its income being derived solely from private donations with some exceptions of a minimal membership fee; its members are not limited to individuals who themselves are licensed or otherwise legally authorized to render the same professional services as the organization; and the disbursement of

funds must be controlled by a board of directors who work voluntarily and without pay.

All of the nonprofit voluntary health associations who qualify under the above definition will hold an exemption certificate and number issued by the North Dakota tax commissioner's office. All vendors selling to voluntary nonprofit health associations should request a copy of the exemption certificate or the exemption number from such associations before making exempt sales.

History: Effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-04

81-04-02-16. Newspapers, magazines, trade journals, etc. The gross receipts from the sale of newspapers to the public are not taxable. The sale of magazines, trade journals, and other periodicals ~~or subscriptions thereto~~ when sold to consumers or users are sales at retail and the gross receipts from such sales are taxable ~~regardless of whether or not such magazines or periodicals are to be delivered in the future and regardless of whether or not they are in existence at the time of the sale of any subscription~~.

Magazines or periodicals that are furnished free by a nonprofit corporation or organization to its members or because of payment by its members of membership fees or dues are not taxable under the sales tax law~~; however, in these cases, the nonprofit corporation or organization shall pay a sales or use tax on the cost of the printing of the magazines or periodicals~~.

The gross receipts from the sale of newsprint and ink used in the publication of a newspaper are not subject to tax.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-04

81-04-02-17. Services. In general the receipts derived from the furnishing of services rendered apart from the sale of tangible personal property are not subject to the sales tax. However, service used in the fabrication or the production of tangible personal property is to be included in the receipts on which the tax is computed where the article fabricated or produced is sold to a final user or consumer. (See section 81-04-02-51.)

Where the sale of tangible personal property involves a charge for the installation of the property sold and the sales price includes the cost of installation and the property remains personal after the installation, the sales tax applies to the entire receipts from the sale. But where the installation charge is set out separate and apart

for the purchaser from the charge made for the personal property installed, the sales tax does not apply to the installation charge. This section does not apply to the repair of personal property owned by others. See section 81-04-02-50 and other applicable sections which apply to repair services.

Any amount received as a periodic minimum charge by a retailer of steam, ~~water,~~ gas, or communication services to a final user is a taxable sale on which the retailer must collect and remit the sales tax regardless of whether or not the customer actually used any of the service that was available to the customer during a particular period. (See section 81-04-02-32.)

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-04

81-04-02-32. Taxable sales - Engaging in business. Taxable sales are sales at retail made in North Dakota by a person engaged in the business of selling at retail to purchasers for final use or consumption and not for resale or processing. Such sales are usually made by retail merchants, but sales at retail, within the meaning of the retail sales tax law, may also be made by manufacturers, jobbers, wholesalers, farmers, and others. (See section 81-04-02-34.)

The term "sale" also includes the exchange of property and any installment, credit, conditional, or consignment sale and includes any other kind of sale or transfer for any consideration. It includes the ordering, selecting, or aiding a customer to select any goods, wares, or merchandise from a price list or catalog, which such customer might order or which might be ordered for and shipped directly to the customer.

The term "sale" also includes the leasing or renting of tangible personal property leased or rented for final use or consumption in this state except that it does not include sales or rental of motor vehicles licensed by the North Dakota motor vehicle registrar on which the tax imposed by North Dakota Century Code chapter 57-40.3 has been paid to North Dakota.

The term "sale" also includes periodic minimum charges made by retailers for furnishing, and having available the services for furnishing steam, ~~water,~~ gas, and communication service.

Engaging in the business of selling at retail includes any of the following methods of transacting business: maintaining, directly or indirectly or through a subsidiary, an office, distribution house, sales house, warehouse, or other place of business, or having an agent, salesman, or solicitor operating within the state under authority of the seller or its subsidiary, irrespective of whether such place of business, agent, salesman, or solicitor is located in this state permanently or temporarily, or whether such seller or subsidiary is

qualified to do business in this state. Every such place of business, agent, salesman, or solicitor shall be required to obtain a North Dakota retail sales tax permit and collect and remit the sales tax on all sales.

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-39.2-19, 57-40.2-13
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-03.2, 57-39.2-03.3, 57-39.2-14, 57-39.2-20

81-04-02-40. Physicians and surgeons. Physicians and surgeons primarily render professional service. They are users or consumers of such tangible property as instruments, splints, dressings, bandages, and similar items used by them in the performance of personal services. The person selling such items to a physician or surgeon is making a sale at retail and must collect and remit a retail sales tax on the gross receipts from such sales.

In some instances, physicians prescribe and compound their own drugs for human consumption or use which they sell separately and apart from the rendering of medical services. In these instances, receipts from such sales are not subject to sales tax since prescription drugs are exempt from sales tax. (See sections 81-04-02-04 and 81-04-02-42.) Medical doctors who sell items of tangible personal property, such as proprietary medicines, separate and apart from the rendering of medical services are regarded as making retail sales and are subject to sales tax on the gross receipts from such sales.

Effective July 1, 1975, the gross receipts from sales of certain artificial devices, artificial limbs, artificial eyes, hearing aids, crutches, and wheel chairs are exempt from sales tax. The artificial devices which are now exempt from tax are those which are individually designed, constructed, or altered solely for the use of a particular crippled person so as to become a brace, support, supplement, correction, or substitute for the bodily structure including the extremities of the individual and artificial limbs, artificial eyes, hearing aids, and other equipment worn as a correction or substitute for any functioning portion of the body. These devices are not taxable when sold by a medical or orthopedic supply company to a medical doctor, nor are they taxable when the medical doctor bills them to a patient. Slings, splints, elastic bandages and stockings, pads, and similar ready-made items are not individually designed, constructed, or altered solely for the use of a particular crippled person and do not qualify for the exemption.

Effective July 1, 1981, the gross receipts from the sales of insulin; glucose usable for the treatment of insulin reactions; urine and blood testing kits and material; and all insulin measuring and injecting devices, including insulin syringes and hypodermic needles are exempt from sales tax. Also exempt are supplies, equipment, and devices to be used exclusively by a person with bladder dysfunction, including

catheters, collection devices, incontinent pads and pants, and other items used for the care and management of bladder dysfunction.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-04, 57-39.2-20

81-04-02-42. Drugstores, druggists, and pharmacists. Sales of drugs, by any drugstore, sold under a doctor's prescription for human consumption or use are not subject to the sales tax. Sales of drugs by a physician, general practitioner, surgeon, or clinic pharmacy are also exempt from the sales tax. (See section 81-04-02-40.) Sales of oxygen to any person for use by him for medical purposes are exempt if sold upon the written order of a doctor. Such sales need not be made by a drugstore to be exempt.

Effective July 1, 1975, sales or rentals of crutches or wheelchairs are exempt from sales tax and effective July 1, 1979, devices and supplies designed or intended for ostomy care and management, including collection devices, colostomy irrigation equipment and supplies, skin barriers or skin protectors and other supplies especially designed for use of ostomates are also exempt from the sales tax.

Effective July 1, 1981, the gross receipts from the sales of insulin; glucose usable for the treatment of insulin reactions; urine and blood testing kits and material; and all insulin measuring and injecting devices, including insulin syringes and hypodermic needles are exempt from sales tax. Also exempt are supplies, equipment, and devices to be used exclusively by a person with bladder dysfunction, including catheters, collection devices, incontinent pads and pants, and other items used for the care and management of bladder dysfunction.

Druggists and pharmacists engaged in the business of selling patent medicines and merchandise for use and consumption are liable for the collection and remittance of the sales tax on the gross receipts from such sales.

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-04, 57-39.2-20

81-04-02-58. Coke and natural gas sold to industrial users. Sales of coke, natural gas, and other fuels that are not subject to a special tax, whether in carload lots or other quantities, to persons who use or consume such substances in producing other tangible personal property or in the rendering of service, constitute sales at retail within the meaning of the North Dakota retail sales tax law, provided that they do not become an integral or ingredient or component part of a

manufactured product which is sold ultimately at retail. ~~Effective July 1, 1975, coal mined in North Dakota is not subject to sales tax.~~

History: Amended effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-04

81-04-02-59. Sales of ice. ~~All~~ Effective July 1, 1981, all sales of ice to a final user or consumer are ~~taxable~~ exempt from sales tax.

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-04

81-04-02-70. Hotels, restaurants, lodging, and boardinghouses. The gross receipts from the leasing or renting of hotel, motel, and tourist court accommodations are subject to sales tax if the period for which the accommodations are leased or rented is less than thirty consecutive calendar days or one month. The term "tourist court" does not include "trailer"; therefore, gross receipts received by a trailer court operator for use by transient guests for parking trailers or trailer coaches will not be taxable; the term "tourist court" does include accommodations provided by such establishments known as cabins, ~~camps~~ hunting lodges, etc.

The sale of meals, lunches, etc., by hotels, restaurants, and other eating places, such as clubs, boarding houses, and dining rooms and like, are sales of tangible personal property to purchasers for consumption. Sale of food supplies and beverage products to such eating places for use by them in preparing and serving meals, lunches, etc., are sales for processing or resale and are not subject to the tax.

A boardinghouse is defined as a place held out to the public where meals are served to regular boarders for periods of one week or more and having accommodations for ten or more boarders.

Where hotels, restaurants, or other eating places furnish meals to their employees as a part consideration of the working arrangement between employer and employee, the hotel, restaurant, or other eating place will be liable for the tax upon the cost of the meals so furnished to employees. In the event that records to substantiate the cost of meals to employees are not available, the commissioner will accept, as a basis for computing tax due upon such meals, figures which may be available and which are the result of records kept by competing hotels, restaurants, and eating places.

Cover charges are to be included in the gross receipts of persons operating restaurants, hotels, clubs, and similar places where such charges are made exclusively for the privilege of occupying space within such eating places, regardless of whether or not the payment of the

cover charges by a patron entitles such patron to receive any food or beverage. This also applies to the so-called "minimum charges" made by clubs or other eating places, the entire amount of which receipts are taxable.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-03.2, 57-39.2-04, 57-39.2-21

81-04-02-71. Meal tickets, coupon books, and merchandise cards. ~~Where meal tickets, coupon books, or merchandise cards are sold by persons engaged in selling taxable commodities or services, the tax shall be levied on the cost of the ticket, book, or card at the time it is sold to the consumer. No tax will then be added at the time of the actual purchase of the merchandise or services. For example, a person purchasing a five dollar meal ticket and paying five dollars will pay fifteen cents tax at the time the person purchases the ticket. For each meal consumed there will be punched out of the ticket the net price of the meal exclusive of the tax.~~

General Authority: ~~NDCC 57-39.2-19~~
Law Implemented: ~~NDCC 57-39.2-01, 57-39.2-02.1~~

Repealed effective October 1, 1982.

81-04-02-71.1. Meal tickets and gift certificates. Where meal tickets or gift certificates are sold, no sales tax shall be levied on the cost of the meal ticket or gift certificate at the time it is sold to the consumer. Sales tax will be added at the time of actual purchase of the meals or merchandise.

For example, a person purchasing a five dollar meal ticket will not pay sales tax on that amount at the time the person purchases the meal ticket. For each meal consumed there will be punched out of the ticket the price of the meal plus the applicable sales tax.

Likewise, a person purchasing a twenty dollar gift certificate will not pay sales tax on that amount at that time. When the gift certificate is redeemed, tax shall be added to the purchase price of the merchandise being selected.

History: Effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1

81-04-02-71.2. Coupon books and merchandise cards. Where coupon books or merchandise cards are sold by persons engaged in selling

taxable commodities or services, the tax shall be levied on the cost of the coupon books or cards at the time they are sold to the consumer. These coupon books or merchandise cards shall be taxable regardless of the fact that some of the services offered in the books or on the cards are nontaxable.

History: Effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1

81-04-02-72. Railway dining ~~cars~~ - Airline dining. ~~The sales of meals, alcoholic beverages, or other tangible personal property on railway trains, club cars, lounge cars, dining cars, and on airplanes being operated through North Dakota constitute sales at retail, the gross receipts from which are taxable provided such meals, alcoholic beverages, or other tangible personal property are ordered or delivered within the boundary lines of this state. It is immaterial whether or not such meals, alcoholic beverages or other tangible personal property may be consumed within the boundary lines of this state.~~ The sales of meals, alcoholic beverages, or other tangible personal property on railway trains, club cars, lounge cars, dining cars, or airlines being operated in or through North Dakota constitute sales at retail, the gross receipts from which are taxable; provided, that such meals, alcoholic beverages or other tangible personal property are ordered or delivered within the boundaries of this state.

When food, meals, or alcoholic beverages are served by an airline as part of the transportation service it renders and no separate charges are made therefore, there is no taxable sale within the sales tax law. Therefore, the airline may not purchase such food, meals, or alcoholic beverages for resale and thus all such purchases which take place in North Dakota are subject to North Dakota sales tax based on the cost of such products to the airline.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-03.2, 57-39.2-04

81-04-02-79. Coal ~~dealers~~. ~~Coal mined in North Dakota is subject to the coal severance tax effective July 1, 1975, and all sales of this coal are exempt from sales tax.~~

~~Coal which was not mined in North Dakota has not been subjected to the coal severance tax and remains subject to sales tax when sold in this state.~~

Coal mined in North Dakota which is subject to the coal severance tax is exempt from sales tax on the sales of this product in this state.

Coal mined outside the state of North Dakota is subject to sales tax when sold in this state.

Effective July 1, 1981, no coal severance tax is imposed on coal used primarily for heating buildings in this state, including the heating of buildings with steam created by the burning of coal. Therefore, sales of such coal to a final user or consumer in this state are subject to sales tax.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-39.2-19
Law Implemented: NDCC 57-39.2-01, 57-39.2-02.1, 57-39.2-04, 57-61

81-05-02-03. Purchase price defined. "Purchase price" means the total amount paid for the motor vehicle whether received in money or otherwise, provided, however, that when a motor vehicle which will be subject to the motor vehicle excise tax or other tangible personal property which will be subject to a sales or use tax when sold or used is taken in trade as a credit or part payment on a motor vehicle taxable under North Dakota Century Code chapter 57-40.3, the credit or trade-in value shall be deducted from the total selling price to establish the purchase price of the vehicle being sold. The trade-in allowance allowed by the seller on a motor vehicle accepted as a trade-in shall constitute the purchase price of the motor vehicle accepted as a trade-in.

If a motor vehicle is purchased by an owner who has had a motor vehicle stolen or totally destroyed, a credit or trade-in credit shall be allowed in an amount equal to the total amount the purchaser has been compensated by an insurance company for the loss. The purchaser must provide the motor vehicle registrar with a notarized statement from the insurance company verifying the fact that the original vehicle was a total loss and stating the amount paid by the insurance company for the loss. The insurance company's statement must accompany the purchaser's application for a certificate of title for the replacement vehicle.

When a motor vehicle is acquired by gift or by any other transfer for a nominal or no monetary consideration, the purchase price will reflect the average value of similar motor vehicles, established by standards and guides as determined by the motor vehicle registrar.

In those instances where a motor vehicle is manufactured by a person who registers it under the North Dakota Century Code chapter 39-04 for the first time, such motor vehicle shall be exempt from motor vehicle excise tax. Component parts purchased to manufacture such vehicle are subject to sales or use tax.

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-40.3-12
Law Implemented: NDCC 57-40.3-01, 57-40.3-05

81-05-02-04. Exemptions. The following are exempt from payment of the North Dakota motor vehicle excise tax:

1. Motor vehicles owned by disabled veterans pursuant to conditions set forth in North Dakota Century Code section 57-40.3-04.

2. Any motor vehicle owned by or in possession of the federal or state government or a political subdivision thereof.

3. Motor carrier vehicles in excess of twenty thousand pounds [9,049 kilograms] gross weight, whether owned or leased, engaged in interstate commerce but only to the extent their revenue from interstate hauling bears to their total revenue from hauling for the preceding operating year.

4. Any motor vehicle transferred without consideration to or from a person thirty days prior to service, during such service, or within thirty days after service in the armed forces of the United States, provided the person certifies to the motor vehicle registrar that the transfer is made only by reason of entering into, serving in, or being discharged from the armed services of the United States.

5. Motor vehicles acquired by inheritance from or by bequest of a decedent who owned the vehicle; the transfer of motor vehicles which were previously titled or licensed in the names of two or more joint tenants and subsequently transferred without monetary consideration to one or more of the joint tenants; the transfer of motor vehicles by way of gift between a husband and wife, parent and child, or brothers and sisters; and the transfer of a motor vehicle to reflect a new name of the owner caused by a business reorganization but the ownership of which business organization remains in the same person or persons as prior to the reorganization. (See section 81-05-02-10.)

6. Motor vehicles transferred between a lessee and lessor, provided that the lessee has been in continuous possession of such vehicle for a period of one year or longer, and further provided that the lessor has paid either the motor vehicle excise tax imposed by North Dakota Century Code chapter 57-40.3 at the time of titling or licensing the vehicle in this state or the use tax imposed by North Dakota Century Code chapter 57-40.2.

7. Any motor vehicle in the possession of and used as a bus exclusively by a nonprofit senior citizens' or handicapped persons' corporation, provided that such bus shall not be used for commercial activities.

8. Vehicles in possession of school districts, used for driver education instruction.

9. Vehicles owned by or in possession of any state institution in this state.

10. Title changes for motor vehicles as a result of name changes resulting from adoption, court order, marriage, or divorce.

11. Any motor vehicle being registered pursuant to North Dakota Century Code chapter 39-04 for the first time by a person who manufactured or assembled the motor vehicle for that person's own use.

12. Any motor vehicle which does not exceed ten thousand pounds [4,535.92 kilograms] gross weight and which is acquired by a permanently physically disabled, licensed driver who is restricted to operating only motor vehicles equipped with special controls to compensate for the disability, or by a permanently physically disabled individual who has either surrendered or who has been denied a driver's license because of a permanent physical disability, provided the individual obtains from the state highway commissioner or the highway commissioner's authorized representative a statement that the individual has such a restricted driver's license or has either surrendered or has not been issued a driver's license because of a permanent physical disability.

13. Motor vehicles which have been previously licensed in the name of an individual who is a member of a general or limited partnership and which are being transferred to the partnership at the time the partnership is established.

14. Motor vehicles which have been previously licensed in the name of a general or limited partnership and which are being transferred to an individual who is a member of such partnership at the time the partnership is terminated.

15. Motor vehicles which have been previously licensed in the name of an individual who is a stockholder in a corporation and which are being transferred to the corporation at the time the corporation is organized.

16. Motor vehicles which have been previously licensed in the name of a corporation which are being transferred to a stockholder of that corporation at the time the corporation is liquidated.

17. Motor vehicles purchased or otherwise acquired by a parochial or private nonprofit school to be used for the transportation of students. The vehicles may not be used in a commercial activity and the school must normally maintain a regular faculty and curriculum and must have a regularly organized body of students.

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-40.3-12

Law Implemented: NDCC 57-40.3-04

81-05-02-07. Penalties.

1. Any person who shall violate any of the provisions of North Dakota Century Code chapter 57-40.3 shall be guilty of a class B misdemeanor.

2. Any person who shall submit a false or fraudulent motor vehicle purchaser's certificate shall be subject to a penalty of five percent of the true amount of the tax which was due or five dollars, whichever is greater, plus one percent of such tax for each month or fraction thereof subsequent to the month in which the false or fraudulent motor vehicle purchaser's certificate was furnished to the motor vehicle registrar. Such penalty shall be paid to either the tax commissioner or the motor vehicle registrar. Unpaid penalties may be enforced in the same manner as the tax imposed by North Dakota Century Code chapter 57-40.3.

3. The tax commissioner, if satisfied that any delay in payment of the motor vehicle excise tax is excusable, may waive, and if paid, may refund all or any part of such penalty, or interest, or both.

4. Whenever a person, including any motor vehicle dealer, collects from the person acquiring a motor vehicle, a motor vehicle excise tax in excess of the amount prescribed or due under this chapter, and if the person does not refund the excessive tax collected to the person who paid it, the person who collected the tax shall pay it to the tax commissioner in the quarterly period in which the excessive collection occurred. The penalty and interest provisions of this section shall apply beginning at the termination of each quarterly reporting period.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-40.3-12
Law Implemented: NDCC 57-40.3-11

81-06-02-01. Eligibility for refund. Any person who buys or uses motor vehicle fuel, except motor vehicle fuel used in motor vehicles operated or intended to be operated in whole or in part upon any of the public highways of this state, on which the motor vehicle fuel tax has been paid may obtain a refund upon application to the tax commissioner if such fuel has been used for agricultural or industrial purposes. Provided, however, the amount of such tax refund shall be reduced by one-eighth cent per gallon [3.79 liters], and the one-eighth cent per gallon [3.79 liters] withheld from the refund shall be deposited in the agriculturally derived alcohol motor vehicle fuel tax fund. Provided, further, that the amount of such tax refund shall be also reduced by one

cent per gallon [3.79 liters]. The one cent per gallon [3.79 liters] withheld from the refund shall be transferred to township road and bridge funds or to the appropriate county fund in the case of unorganized townships. This one cent reduction of the tax refund does not apply to motor fuels used in aircraft or fuels purchased by the state or by political subdivisions of the state.

Any person who buys or uses aviation fuel (gasoline) on which the motor vehicle fuel tax has been paid may obtain a refund upon application to the tax commissioner. Those refund claims for aviation fuel (gasoline) taxes will be reduced by the four percent aviation fuel tax levied under North Dakota Century Code chapter 57-56 and by the one-eighth cent per gallon [3.79 liters] referred to above.

No refund claim for motor vehicle fuel tax or aviation fuel tax will be allowed for less than ~~ten~~ five dollars.

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-50-07
Law Implemented: NDCC 57-50-01, 57-50-03

81-06-02-05. Refunds to private individuals or corporations prohibited - Exception. Motor vehicle fuel used by a person, firm, or private corporation is subject to the eight cents per gallon [3.79 liters] motor vehicle fuel tax; and no refund is allowed if the work performed by a person, firm, or public corporation is paid for by any public funds. "Public funds" means any payment or part of payment by the United States, state, county, city, township, park district, or other political subdivision. ~~If a dealer is aware that the motor vehicle fuel being sold is to be used on a privately funded project only, and if the dealer is aware that the buyer has no licensed diesel equipment, the dealer may charge the two percent special fuels tax levy directly. Each invoice must be clearly marked with the project name or number for audit purposes.~~

History: Amended effective October 1, 1982.
General Authority: NDCC 57-50-07
Law Implemented: NDCC 57-50-05.1

81-06-02-06. Assignment of tax on agricultural purchases of gasoline.

1. The period during which dealers can take assignments on agricultural fuel sales for credit on their tax returns is April, May, June, July, August, and September. Tickets must be thirty days old before credit can be allowed on dealers' returns. Before any person shall be allowed to assign the person's motor fuel tax refund to the seller during this period, the person must have an unrevoked permit issued by the tax commissioner authorizing such assignment. Application

forms may be obtained from the state tax commissioner. There is no fee for a permit.

2. Those persons who have a valid tax assignment permit issued by the state tax commissioner under the provisions of North Dakota Century Code section 57-50-11.1 shall be charged one-eighth cent per gallon [3.79 liters] by the dealer and the one-eighth cent charge shall be remitted to the state tax commissioner by the dealer when the dealer submits the tax assigned invoices for credit. The one-eighth cent per gallon [3.79 liters] shall be deposited in the agriculturally derived alcohol motor vehicle fuel tax fund.

3. For the period from July 1, 1981, through June 30, 1983, those persons who have a valid tax assignment permit issued by the state tax commissioner shall also be charged one cent per gallon [3.79 liters] by the dealer and the one cent charge shall be remitted to the state tax commissioner by the dealer when the dealer submits the tax assigned invoices for credit. The one cent per gallon [3.79 liters] shall be transferred to township road and bridge funds or to the appropriate county fund in the case of unorganized townships.

4. All tickets must have the following items completed and listed on each ticket:

~~1.~~ a. Tax must be listed on all tickets.

~~2.~~ b. Purchaser's permit number must be listed on assigned tickets.

~~3.~~ c. Address of purchaser.

~~4.~~ d. Tickets on which the tax is assigned must have a tax assignment agreement stamp thereon and signature of an assignor, and also goods received signature. One signature is not sufficient. In cases where the signature of the assignor or purchaser has not been obtained by the time the invoice is submitted for credit, the tax department will send a certification form for the dealer listing such purchases and certifying the tax on those purchases was intended to be assigned. Signed certifications must be submitted to the tax department by the dealer by the date specified on the form and must be signed by the purchaser and the dealer.

5. All tax assignments must meet the following conditions:

~~1.~~ a. Custom combine tickets are not acceptable for assignment credit on monthly tax return.

~~2.~~ b. Assignments will be accepted on agricultural fuel only in bulk deliveries of fifty gallons [189.27 liters] or more.

~~3.~~ c. All invoices must have the carbon imprint on the reverse side.

~~4.~~ d. Tickets must be tax assigned by the purchaser.

~~5.~~ e. Sales of special fuels are not acceptable for assignment credit on dealer's report.

~~6.~~ f. Assignment stamps should be placed where they least interfere with other items and signatures on the ticket.

~~7.~~ g. If more than one item appears on the ticket, the gallonage on which tax is being assigned must be clearly indicated.

~~8.~~ h. Only original tickets will be acceptable.

6. Tickets issued to a partnership must be assigned as follows:

~~1.~~ If issued to Brown Brothers, the assignment agreement must be signed "Brown Brothers by John Brown, partner". If issued in individual names as "Bob and John Brown," the assignment agreement should be signed "Bob and John Brown by John Brown, partner". If the ticket is issued to the husband only, it must be signed by the husband, unless the wife signed the tax assignment permit application, in which case the wife could effect the assignment.

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-50-07
Law Implemented: NDCC 57-50-11, 57-50-11.1

81-06-03-01. Definition. "Special fuel" means ~~and includes all combustible gases and liquids suitable for the generation of power for propulsion of motor vehicles and shall include all gases and liquids which meet the specifications as determined by the state laboratories department pursuant to the provisions of North Dakota Century Code section 19-10-10, except that it does not include gasoline. Special fuels include tractor fuel, diesel, kerosene, heater oil, furnace oil, burner fuel, butane, and propane gases~~ a combustible gas or liquid suitable for generating power to propel a motor vehicle. It includes diesel fuel, heating oil, kerosene, propane, butane, agriculturally derived alcohol used pure or blended with another agriculturally derived alcohol, and fuel consisting of a blend of diesel fuel and recovered oil. It does not include gasoline or antifreeze.

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-52-17
Law Implemented: NDCC 57-52-03

81-06-03-02. Imposition of tax. There is levied and imposed an excise tax of eight cents per gallon [3.79 liters] on the sale or delivery of special fuels, except those special fuels used for heating, agricultural, industrial, or railroad purposes. Contractors performing government contracts are subject to the eight cents per gallon [3.79 liters] tax since public funds are involved. Banks, trust companies, building and loan associations, and public and private educational facilities are also subject to the tax. The tax is collected by the special fuel dealer at the time of the sale or delivery of the product. The special fuel dealer shall be allowed to deduct the actual shrinkage of the total gallonage of special fuel received each calendar month, if such allowance will not exceed one percent of the total received by the dealer during such month. Those special fuel dealers of liquefied petroleum gas shall also be allowed to deduct the actual shrinkage of the total gallonage of liquefied petroleum gas received by them each month but such allowance may not exceed two percent of the total received by them during such month. A special excise tax at the rate of two percent is levied on all sales of special fuels which are exempt from the eight cent per gallon tax and on all sales of special fuels which are taxed at the eight cent per gallon rate if that tax is subsequently refunded.

For the period from July 1, 1981, through June 30, 1983, fuel consisting of a blend of diesel fuel and recovered oil shall be taxed at four cents per gallon [3.79 liters]. This product must have at least twenty percent recovered oil in the blend to be eligible for the special reduced rate of four cents per gallon [3.79 liters].

History: Amended effective October 1, 1982.
General Authority: NDCC 57-52-17
Law Implemented: NDCC 57-35-06, 57-35.1-02, 57-50-05.1, 57-52-04

81-06-03-08. Penalties. In case any special fuel dealer refuses or fails to file a return required by this chapter within the prescribed time, there is a penalty of five dollars or ~~two~~ five percent of the tax due, whichever is greater, together with interest of one percent per month on the tax due for each month or fraction thereof during which the return remains unfiled or unpaid. These penalties also apply to importers for use.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-52-17
Law Implemented: NDCC 57-52-12

81-06-04-02. Imposition of tax. Effective July 1, 1977, a tax of eight cents per gallon [3.79 liters] is imposed on all motor vehicle fuel sold or used in this state. Every dealer who is required to collect the motor vehicle fuel tax shall charge and collect the tax on all motor vehicle fuel sold. Banks, trust companies, building and loan associations, and public and private educational facilities are subject to the eight cents per gallon [3.79 liters] tax.

A tax of four cents per gallon [3.79 liters] shall be imposed on gasoline sold which contains a minimum ten percent blend of an agricultural ethyl alcohol or methanol whose purity is at least ninety-nine percent alcohol.

History: Amended effective September 1, 1979; October 1, 1982.
General Authority: NDCC 57-54-20
Law Implemented: NDCC 57-54-08

81-06-04-06. Penalties. In case any motor vehicle fuel dealer refuses or fails to file a return required by this chapter within the prescribed time, there is a penalty of five dollars or ~~two~~ five percent of the tax due, whichever is greater, together with interest of one percent on the tax due for each month or fraction thereof during which the return remains unfiled or unpaid. These penalties also apply to importers for use.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-54-20
Law Implemented: NDCC 57-54-23

81-07-01-03. Federal tax regulations adopted. To the extent that they are not in conflict with the provisions of North Dakota Century Code chapter 57-37.1 or any other provision of law, all federal tax regulations and rulings prescribed by, or under the direction of, the secretary of the treasury of the United States for the administration of the federal Internal Revenue Code of 1954, as amended, are hereby incorporated by reference thereto and adopted by the tax commissioner for the administration of North Dakota Century Code chapter 57-37.1.

History: Effective October 1, 1982.
General Authority: NDCC 57-37.1-17
Law Implemented: NDCC 57-37.1

81-07-02-01. Definitions.

1. Unless the context or subject matter otherwise requires, any term or phrase used in North Dakota Century Code chapter 57-37.1 and in this chapter shall have the same meaning for the following estates of decedents as is given to the similar term or phrase in the federal estate tax law.

   a. For estates of decedents who died on or after July 1, 1975, and before January 1, 1977, the term or phrase shall have the same meaning as given to the similar term or phrase in the United States Internal Revenue Code of 1954 as amended to and including December 31, 1974.

   b. For estates of decedents who died on or after January 1, 1977, and before March 16, 1979, the term or phrase shall

have the same meaning as given to the similar term or phrase in the United States Internal Revenue Code of 1954 as amended to and including December 31, 1976.

c. For estates of decedents who died on or after March 16, 1979, and before January 1, 1981, the term or phrase shall have the same meaning as given to the similar term or phrase in the United States Internal Revenue Code of 1954 as amended to and including December 31, 1978.

d. For estates of decedents who died on or after January 1, 1981, the term or phrase shall have the same meaning as given to the similar term or phrase in the United States Internal Revenue Code of 1954 as amended to and including December 31, 1980.

"Federal gross estate" will be that valuation, when computed correctly, found on the United States estate tax return on page three under "recapitulation" and on page one, line one, under "computation of tax". "Federal taxable estate" will be that valuation, when computed correctly, found on the United States estate tax return on page one, line five, under "computation of tax".

2. "Personal representative" will include an executor, an administrator, a successor personal representative, a special administrator, or any person who performs substantially the same function under the law governing the person's status. "General personal representative" excludes special administrator. "Special administrator" means a personal representative as described by North Dakota Century Code sections 30.1-17-14 through 30.1-17-18. "Successor personal representative" means a personal representative, other than a special administrator, who is appointed to succeed a previously appointed personal representative.

   The term "person in actual or constructive possession of any property of the decedent" includes, among others, the decedent's agents and representatives; safe-deposit companies, warehouse companies, and other custodians of property in this state; brokers holding, as collateral, securities belonging to the decedent; and debtors of the decedent in this country.

3. The rule for determining residency for a person in North Dakota is set out in North Dakota Century Code section 54-01-26. This section states that every person has a legal residence. It further sets out the legal elements of this residence as follows:

   a. It is the place where one remains when not called elsewhere for labor or other special or temporary purpose, and to which one returns in seasons of repose.

b. There can be only one residence.

c. A residence cannot be lost until another is gained.

d. The residence of the father during his life, and after his death, the residence of the mother, while she remains unmarried, is the residence of the unmarried minor children.

e. The residence of the husband is presumptively the residence of the wife except in the case of establishing residence for voting purposes.

f. The residence of an unmarried minor who has a parent living cannot be changed by either the minor's own act or that of the minor's guardian.

g. The residence can be changed only by union of act and intent.

If the decedent is not found to be a "resident decedent" under these criteria, the decedent will be considered a "nonresident decedent".

4. "Situs of property" for the purposes of determining whether property will be included in the North Dakota estate or in another state's estate will be determined as follows:

a. Real property. The situs of real property generally is in the state or country in which it is situated. This includes interests in real property which are related to the real property as mineral interests and leases, equitable interests in real estate as in a vendee's interest in a contract for deed, real property subject to quiet title actions, remaindermen's interests, and life estates. This, however, will not include standing crops growing on real property as such is considered tangible personal property.

b. Tangible personal property. The situs of tangible personal property is in the state or ~~country~~ county in which it was normally kept or located; if the property was in a noncustomary location at the time of the decedent's death because it has been moved sometime near the decedent's death, the usual location will be the situs.

An example of this is where a farmer normally keeps a tractor in an equipment shed, but at the time of the farmer's death the tractor had been left temporarily in a field in another state. The situs of the tractor as tangible personal property would be in the state where the equipment shed is located. For the purposes of this provision, cash is tangible personal property whether it

be located in a safe-deposit box, on the person or otherwise.

c. Intangible personal property. The situs of intangible personal property is in the state or ~~country~~ county in which the decedent was a resident at the date of the decedent's death as determined by the criteria set out in subsection 3. As to intangible personal property, a resident may specify in the resident's will that the situs of all or any part of the intangible personal property, which is included for estate tax purposes, shall be at any location within a county or counties in this state where the resident resided for at least fifteen years after attaining eighteen years of age. Intangible personal property includes stocks, bonds, notes, good will, accounts receivable, claims, partnership interests, patents, choses in action, life insurance, a vendor's interest in a contract for deed, bank accounts, and any other contractual obligations.

5. For North Dakota estate tax purposes the United States Internal Revenue Code includes amendments through December 31, ~~1976~~ 1980.

6. Reference to the singular includes the plural.

History: Amended effective January 1, 1980; October 1, 1982.
General Authority: NDCC 57-37.1-17
Law Implemented: NDCC 11-21-05, 30.1-17-14, 30.1-17-15, 30.1-17-16, 30.1-17-17, 30.1-17-18, 54-01-26, 57-37.1-01

81-07-02-05. Property previously taxed.

~~1. In general. North Dakota Century Code section 57-37.1-05 provides for allowance of a credit against the taxes imposed by North Dakota Century Code chapter 57-37 in decedent's estate with respect to particular property that was taxed in a prior estate, subject to the following requirements:~~

~~a. The property respecting which the credit for tax is sought must have been received by the decedent as a gift, bequest, devise, or inheritance from a prior decedent who died within five years prior to the death of the decedent.~~

~~b. The property must be identified as the same which the decedent so received or which was acquired in exchange therefore.~~

c. The property must have been included in the gross estate of such prior decedent.

d. If an exemption was deducted in the prior estate for the entire amount of all property which the decedent received as a beneficiary of that estate, then no credit is allowable against the tax on the decedent's estate even though some or all of that property is included in the decedent's gross estate and is identifiable as having been included in the prior estate.

e. If an exemption is deducted in the decedent's estate for the entire amount of all property received by the beneficiary who receives the particular property that was taxed in the prior estate, no credit is allowed against the tax on the decedent's estate for any estate tax paid in the prior estate on that particular property.

f. In no case shall a credit be allowed for more than the amount of tax paid on the original estate, and in no case shall the credit exceed the tax due on the present estate.

2. Computation of credit. The following method provides the procedure for determining the amount of credit that can be deducted on the decedent's estate tax return for North Dakota estate taxes paid in the prior estate on property which meets the requirements set out in subsection 1.

a. Property in the first estate which is included in the second estate is divided by the North Dakota adjusted gross in the first estate and the percentage result used to determine the North Dakota tax paid in the first estate.

b. Property which is included in the second estate is divided by the North Dakota adjusted gross in the second estate and the percentage result used to determine the North Dakota tax on the second estate. The smaller result of the two estates becomes the allowable North Dakota tax credit.

c. When more than one estate is allowed a credit, never can the combined credits used exceed the allowable tax paid in the first estate.

General Authority: NDCC 57-37.1-17
Law Implemented: NDCC 57-37, 57-37.1-05

Repealed as the result of S.L. 1981, ch. 584, § 5.

81-07-02-10. Personal representative to furnish necessary documents to the tax commissioner.

1. Under North Dakota Century Code section 57-37.1-10, the personal representative has the duty to furnish the tax commissioner with the following documents:

   a. One copy of application for determination of estate tax. This document is the North Dakota estate tax return as prescribed by the tax commissioner under North Dakota Century Code chapter 57-37.1 and this article.

   b. Two copies of certificate of estate tax determination (form 54.25). This document is in the form which is approved by the tax department after payment of the final estate tax liability. One copy will be returned to the personal representative or attorney for the estate for filing with the register of deeds in appropriate counties in order to release the estate tax lien imposed by this chapter, and one copy will be retained by the tax commissioner.

   c. Two copies of situs affidavit (form 54.29).

   d. A copy of the decedent's will, if the decedent died testate.

   e. A copy of the federal estate tax return.

   f. All other such information as the tax commissioner shall require.

   These documents are required only in instances where the estate is subject to a filing requirement.

2. Once the tax commissioner has determined the proper amount of estate tax due, the commissioner will notify the personal representative of the amount of such assessment. The certificate of estate tax determination will not be approved until the estate tax liability has been paid. However, if the personal representative does not receive such a notice of assessment from the tax commissioner, it will not excuse the nonpayment of the tax nor invalidate the tax or interest on an estate.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-37.1-17
Law Implemented: NDCC 57-37.1-10, 57-37.1-17

81-07-02-12. Duties of depositories - Denial of access to safe-deposit box without order of county court. North Dakota Century Code section 57-37.1-12 requires any safe-deposit company or other institution or person engaged in the business of renting safe-deposit boxes or similar receptacles to procure from each person given access thereto an agreement in writing to the effect that upon the death of any person having the right of access to such box or receptacle, notice of such death will be given to such company or person before seeking access to such box or receptacle. Before the contents of such box or receptacle may be released to a person having the right of access to such box or receptacle, a complete inventory of the contents must be prepared by ~~such person~~ the personal representative of the estate or a cotenant of the safe-deposit box or receptacle in the presence of an officer or other agent of the lessor of the box. The inventory so prepared shall be filed with the tax commissioner by the lessor of the box within thirty days from the date of its preparation. After complying with the provisions of North Dakota Century Code section 57-37.1-12 the lessor shall be released of all liability to persons entitled to access to such box or receptacle and to the state of North Dakota for anything taken from the box.

Any person or corporation violating any provision of North Dakota Century Code section 57-37.1-12 shall be guilty of a class A misdemeanor, and in addition thereto, shall be liable for the amount of the tax and interest due under North Dakota Century Code chapter 57-37.1 on the securities, deposits, or other assets contained in such box or receptacle at the time of any unauthorized access thereto. The above penalties may be enforced by either the state's attorney or the tax commissioner. See North Dakota Century Code section 57-37.1-14.

History: Amended effective January 1, 1980; October 1, 1982.
General Authority: NDCC 57-37.1-17
Law Implemented: NDCC 57-37.1-12, 57-37.1-14

81-07-02-13. Depositories - Notice of transfer of decedent's assets.

1. North Dakota Century Code section 57-37.1-13 provides, in effect, that any individual, corporation, or other person having possession or control of any asset standing in the name of a resident or nonresident decedent, or belonging to or standing in the joint name of such decedent and one or more other persons can transfer or pay the asset to whomever is entitled to it without first giving any prior notice to, or obtaining permission of, any county court or the tax commissioner and that such individual, corporation, or other person will incur no liability for estate tax, provided that notice of the transfer or payment is given to the tax commissioner of any amount paid that had a value in excess of ~~one~~ five thousand dollars within thirty days after the transfer or payment is made. The notice is to be given on a form prescribed by the tax commissioner.

The words "paid" and "payment" as used in subsection 1 of North Dakota Century Code section 57-37.1-13 with respect to a safe-deposit box mean the release of the contents of the box by the bank or other company to the person who has a right of access to it, pursuant to the order required by North Dakota Century Code section 57-37.1-12. The notice requirement of subsection 1 of North Dakota Century Code section 57-37.1-13 provides that the bank or other person having control over the box furnish the tax commissioner with a copy of the inventory of the contents of the box that is made when access to it is given pursuant to the county court's order. Once this is done, no further notice is required even though some or all of the contents of the box are redeposited in the box.

The requirements for the notice prescribed by subsection 1 of North Dakota Century Code section 57-37.1-13 apply irrespective of whether or not the amount of estate tax due has been determined and paid. If no notice is given by the transferor, as prescribed herein, the transferor shall be liable for any estate tax which is unpaid on the asset which was transferred. In addition, the transferor would subject oneself to the criminal liability of North Dakota Century Code section 57-37.1-14 which imposes the penalty of a class A misdemeanor for violations of North Dakota Century Code section 57-37.1-13. North Dakota Century Code section 57-37.1-14 also subjects the transferor to liability for the amount of taxes, interest, and penalties due under the provisions of the estate tax law on the securities, deposits, or other assets contained in the safe-deposit box or other similar receptacle.

2. In the case of an insurer paying proceeds of a life insurance contract on the life of a decedent, the insurer may pay the proceeds of the life insurance contract to the stated beneficiary in the contract immediately. However, the insurer shall give the tax commissioner notice of the amount paid pursuant to the contract, if in excess of five thousand dollars, and any other information required by the tax commissioner. Such notice shall be filed with the tax commissioner within thirty days from the date of payment.

3. The provisions of subsection 1 of North Dakota Century Code section 57-37.1-13 shall not apply when a request for the transfer of securities has been made by any trust company acting as a personal representative of an estate, provided that the trust company is qualified to do business under the laws of the state of North Dakota.

History: Amended effective January 1, 1980; October 1, 1982.
General Authority: NDCC 57-37.1-17
Law Implemented: NDCC 57-37.1-13, 57-37.1-14

81-07-02-17. Supervision by tax commissioner.

1. The tax commissioner has complete supervision of the enforcement and collection of all estate taxes due under the provisions of the estate tax law. The tax commissioner shall make such rules and regulations as may be necessary for the interpretation and enforcement thereof. The tax commissioner may call upon other departments of state government and employ attorneys, examiners, and special agents to assist in carrying out the intent and purposes of the estate tax law.

2. The federal estate tax rules and regulations adopted by the United States internal revenue service through December 31, ~~1976~~ 1980, shall apply to the North Dakota estate tax law unless inconsistent with any provisions of North Dakota Century Code chapter 57-37.1 or with any rule or regulation promulgated by the tax commissioner.

3. The tax commissioner may prescribe and devise forms, application blanks, certifications, form letters, and other such printed matter as are deemed appropriate and necessary for carrying out the intent and purposes of the estate tax law. The tax commissioner will also keep appropriate records in order to provide the legislative assembly with statistical information.

History: Amended effective October 1, 1982.
General Authority: NDCC 57-37.1-17
Law Implemented: NDCC 57-37.1-17

APPENDIX A

Repealed effective January 1, 1980.

APPENDIX B

Repealed effective January 1, 1980.

APPENDIX C

~~Sample computation of North Dakota estate tax due on property taxed in a prior estate.~~

~~MARY JONES, D.O.D. January 10, 1970~~

Total Gross Estate	$110,000
Less Expenses	10,000
For Distribution	100,000
John Jones - Spouse - Received	100,000
Tax	1,500

JOHN JONES, D.O.D. February 15, 1973

Total Gross Estate	$120,000
Less Expenses and Taxes	28,000
For Distribution	92,000
All to Son John Jr.	92,000
Tax	3,900

PROPERTIES IN JOHN'S ESTATE TRACEABLE TO MARY'S ESTATE

	Mary	John
Schedule A	$ 8,000	$16,000
Schedule B	10,000	8,000
Schedule E	25,000	60,000
Total	$43,000	$84,000

Step 1--$ 43,000 (Property in Mary's Estate)
$100,000 (Adjusted Gross Estate) = .43%

$ 1,500 (Tax in Mary's Estate) x .43% = $645.00

Step 2--$ 84,000 (Property in John's Estate)
$ 92,000 (Adjusted Gross Estate) = .91%

$ 3,900 (Tax in John's Estate) x .91% = $3,549.00

(See subdivisions a and b of subsection 2 of section 81-07-02-05.)

Repealed as the result of S.L. 1981, ch. 584, § 5.

TITLE 89

Water Conservation Commission

OCTOBER 1982

89-02-01-02. Definitions. Unless the context otherwise requires, the following definitions apply:

1. "Assessment drain" means any drain constructed pursuant to North Dakota Century Code chapter 61-16.1 or 61-21.

2. "Board of ~~commissioners~~ managers" means the board of ~~commissioners~~ managers of a water ~~management~~ resource district.

~~2.~~ 3. "District" means water ~~management~~ resource district.

~~3.~~ 4. "Drain" includes any natural watercourse (as a lake, river, creek, stream, or draw) opened or improved for the purpose of draining a pond, slough, or lake, or any series thereof, and any artificial drains of any nature or description (as a canal, grassed ditch, ditch, tile, or pipe) constructed for such purpose, including dikes and other appurtenant works.

~~4.~~ 5. "Lake" means a ~~lowland~~ land depression having a greater depth of water and having more permanent standing water than either a slough or pond. This definition classifies lakes as type five wetlands or "inland open fresh water".

~~5.~~ 6. "Lateral drain" for the purpose of regulating the drainage of water means a drain constructed after the establishment and construction of the original drain or drainage system (for which a permit was obtained) and which flows into such original drain or drainage system.

~~6. "Legal drain" means a drain constructed pursuant to North Dakota Century Code chapter 61-21.~~

7. "Meandered lake" means any pond, slough, or lake which has ~~been totally or partially meandered and its metes and bounds established~~ had its boundaries established by metes and bounds in the survey of public lands by the government of the United States ~~in the survey of public lands~~.

8. "Party of record" means any person who submits oral or written testimony and evidence for the record of the state engineer's public hearing.

9. "Person" means a ~~human being~~ person, firm, partnership, association, corporation, or any other type of private legal relationship, and any governmental organization, which includes, but is not limited to, any agency of the United States, a state agency, and any political subdivision of the state.

~~9.~~ 10. "Pond" means ~~the lowland~~ a land depression where the soil is covered with six inches [15 centimeters] to three feet [0.91 meters] or more of water ~~during~~ throughout the growing season. This definition classifies ponds as type four wetland or "inland deep marshes".

~~10.~~ 11. "Slough" includes three types:

a. Type one sloughs are "seasonally flooded basins or flats" which includes ~~lowlands~~ land depressions where the soil is covered with water, or is waterlogged, during variable seasonal periods but is usually well drained during much of the growing season.

b. Type two sloughs are "inland fresh meadows" which includes ~~lowlands~~ land depressions where the soil is usually without standing water during most of the growing season but is waterlogged within at least a few inches of its surface.

c. Type three sloughs are "inland shallow fresh marshes" which includes ~~lowlands~~ land depressions where the soil is usually waterlogged ~~during~~ throughout the growing season and is often covered with as much as six inches [15 centimeters] or more of water.

~~11.~~ 12. "State engineer" means the state engineer, appointed pursuant to North Dakota Century Code section 61-03-01, or the state engineer's designee.

13. "Supplemental public hearing" means a hearing held to review evidence not contained in the record of the state engineer's public hearing.

~~12.~~ 14. "Watercourse" is defined by North Dakota Century Code section 61-01-06. That section provides: "A watercourse entitled to the protection of the law is constituted if there is a sufficient natural and accustomed flow of water to form and maintain a distinct and a defined channel. It is not essential that the supply of water should be continuous or from a perennial living source. It is enough if the flow arises periodically from natural causes and reaches a plainly defined channel of a permanent character." Watercourse, for the purposes of this chapter, also means an outlet channel utilized to carry drained water from the outlet of the drain to a watercourse, as defined by section 61-01-06.

~~13.~~ 15. "Watershed" means the area ~~contributing surface waters~~ which drains into a slough, pond, or lake.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-03. Permit required.

1. A permit is required before any person may construct a drain for the purpose of draining waters from a slough, pond, or lake, or any series thereof, having a watershed of eighty acres [32 hectares] or more.

2. A permit is required before any person may drain by pumping a slough, pond, or lake or connected series of sloughs, ponds, or lakes having a watershed of eighty acres [32 hectares] or more.

3. A permit is required before any person may drain or cause to be drained, or who shall attempt to drain any meandered lake.

4. A permit is required for ~~a "legal drain"~~ an assessment drain constructed pursuant to North Dakota Century Code chapter 61-16.1 or 61-21.

5. A permit is required for the construction of any lateral drain, as defined herein, unless it is within the assessed area of ~~a legal~~ an assessment drain which has been permitted for the entire assessed area, in accordance with section 89-02-01-04.

6. A permit is required before any person may modify the drainage authorized in the original permit. Modification of drainage shall include deepening and widening of a drain, or the extension of any drain.

7. A permit is required before any person may fill a pond, slough, or lake, for the purpose of causing the pond, slough,

or lake having a watershed of eighty acres [32 hectares] or more to be drained by elimination of the existing storage.

8. A permit is required before any person may clean an old drain which has not been constructed as ~~a legal~~ an assessment drain and has not been properly maintained.

~~9. A permit is not required for the cleaning and clearing of obstructions to an authorized drain, or seeding or riprapping, provided that the drainage authorized in the original permit is not altered. Nor shall a permit be required for the cleaning and clearing of obstructions to a drain constructed pursuant to North Dakota Century Code chapter 61-21 which did not require a drainage permit when constructed, provided the drain has been properly maintained and the cleaning or clearing does not alter the original drainage.~~

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-04. Permits for ~~legal~~ assessment drains. The permit for ~~a "legal drain"~~ an assessment drain constructed pursuant to North Dakota Century Code chapter 61-16.1 or 61-21, if so specified, may encompass the entire assessed or benefited area. In order for a permit to encompass the entire assessed or benefited area, the ~~legal~~ assessment drain must be designed to accommodate, as determined by the state engineer, the drainage of the entire assessed area, and must be so stated on the application. However, ~~a legal~~ an assessment drain approved in accordance with this section may still require the approval of the appropriate ~~drain board or water management~~ district prior to the construction of lateral drains, as defined herein, within the assessed area.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-05. Exceptions to permit required. The provisions of section 89-02-01-03, except subsection 3, shall not apply to any drain constructed under the direct and comprehensive supervision of ~~a~~ the federal or state ~~agency~~ agencies specified in this section. The only agencies deemed capable of such comprehensive supervision are the state water conservation commission, ~~state highway department,~~ army corps of engineers, the soil conservation service, for projects constructed pursuant to the Watershed Protection and Flood Prevention Act [Pub. L. 83-566; 16 U.S.C. 1001], and the bureau of reclamation. However, these agencies shall notify the state engineer of any proposed drainage projects under their direct supervision during the planning stages.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-06. Methods for determining area of watershed. The following methods may be utilized in determining whether the area of a watershed for a slough, pond, or lake, or any series thereof, comprises eighty acres [32 hectares] or more.

1. The watershed area may be estimated from the most accurate or reliable maps or surveys available. Published seven and one-half minute topographic maps or a survey conducted under the supervision of a registered land surveyor are preferred.

2. Aerial photographs of the watershed may also be used to define the drainage area.

3. An onsite investigation of the drainage area by the ~~water management~~ district or the state engineer, or both, without the assistance of other data may be sufficient to determine drainage area.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22~~ 61-16.1-41

89-02-01-07. Filing application. Any person desiring a drainage permit shall file an application with the state engineer on state water commission form number twenty-eight. A copy of the permit application shall also be filed with the water ~~management~~ resource district within which is found a majority of the watershed or drainage area of the pond, slough, or lake, or ~~any~~ series thereof. ~~(The Richland County water management district has requested that the permit application be forwarded through the local water management district for consideration before submission to the state engineer).~~ The applicant, if requested by the state engineer or the ~~water management~~ district, shall provide an engineering analysis showing the downstream impacts of the proposed drainage. The analysis ~~shall~~, at the discretion of the state engineer or the board of managers, may include a determination of the capacity of the drain and the receiving watercourse and a comparison of volume and timing of predrainage and postdrainage flows. If the application is incomplete, or if the information contained therein is insufficient to enable the state engineer or the appropriate ~~water management~~ district to make an informed decision on the application, the application shall be returned to the applicant for correction.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-08. Referral of applications to appropriate ~~water management~~ district. The state engineer shall determine whether the application involves drainage of statewide or interdistrict significance. The state engineer shall attach to the application any comments, recommendations, and engineering data which may assist the appropriate district in making a determination on the application. The application shall then be referred to the appropriate ~~water management~~ district within which is found a majority of the watershed or drainage area of the pond, slough, or lake, or any series thereof.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-09. Criteria for determining whether drainage is of statewide or interdistrict significance. In determining whether the proposed drainage is of statewide or interdistrict significance, the state engineer shall be guided by the following criteria:

1. Drainage which would affect property owned by the state or its political subdivisions.

2. Drainage of sloughs, ponds, or lakes having recognized fish and wildlife values.

3. Drainage or partial drainage of a meandered lake.

4. Drainage which would have a substantial effect on another water ~~management~~ resource district.

5. Drainage which would convert previously noncontributing areas (based on twenty-five year event - four percent chance) into permanently contributing areas.

6. ~~The state engineer shall not be limited to the criteria of subsections 1 through 5. For good cause, the state engineer may classify any proposed drainage as having statewide or interdistrict significance, or the state engineer may determine that certain proposed drainage is not of statewide or interdistrict significance even though the proposed drainage falls within subsections 1, 2, 3, or 5.~~ Assessment drains shall be considered of statewide or interdistrict significance.

7. ~~Drainage of type one sloughs is not of statewide or interdistrict significance.~~ For good cause, the state engineer may classify any proposed drainage as having statewide or interdistrict significance, or the state engineer may determine that certain proposed drainage is not of statewide or interdistrict significance.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-10. District hearing on applications of statewide or interdistrict significance. Upon referral by the state engineer of an application of statewide or interdistrict significance to the ~~water management~~ district, the board of ~~commissioners~~ managers shall set a the date, time and place for a public hearing on the application. The purpose of the hearing ~~shall be to collect evidence from those concerned~~ is to establish a record on which to base a decision as to whether the application to drain ~~should~~ shall be granted, and if so, ~~the conditions under which any water may be drained~~ under what conditions the water is to be drained. ~~In addition, the board shall investigate whether the projected additional quantity of water which will be drained will overburden the watercourse into which water will be drained, and whether such drainage will flood or adversely affect the lands of lower proprietors.~~ A hearing shall not be required for proposed drainage which is not of statewide or interdistrict significance. However, the appropriate ~~water management~~ district may hold hearings on such applications at its discretion.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-11. Emergency drainage. The requirement for a hearing and notice thereon may be waived by the state engineer in order for the board of ~~commissioners~~ managers to process applications for temporary emergency drainage. However, a hearing shall be conducted at the earliest opportunity if the emergency drainage is to be permanent and has been determined by the state engineer to be of statewide or interdistrict significance.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-12. Notice of district hearing. For all hearings required of the district pursuant to this article, the ~~water management~~ district shall, at the applicant's expense, publish notice in a newspaper of general circulation in the area of the proposed drainage once a week for two consecutive weeks. The final published notice shall be published not more than fifteen days, nor less than five days, before the date set for the hearing. The ~~water management~~ board of managers shall also, at the applicant's expense, give notice by certified mail not more than thirty days nor less than ten days from the date set for hearing, to:

1. All record title owners of real estate or holders of a contract for deed whose property would be directly affected by the proposed drainage, as determined by the board of ~~commissioners of the water management district~~ managers.

2. All downstream landowners riparian to the watercourse into which water will be drained, within two miles [3 kilometers] from the outlet of the drain as determined by the board of managers.

3. Any ~~water management~~ district which would be directly affected by the water to be drained. ~~This must include any adjacent district into which the drained water will flow.~~

4. The North Dakota game and fish department.

5. The North Dakota department of health.

6. The state highway department, county commissioners, board of township supervisors, for any proposed drainage which will affect the right of way of any ~~state~~ highway or roadway.

7. Any person who has notified the district in writing of the person's objection to the drainage project proposed, and who has requested in writing notification of such hearing on the drainage project proposed.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-15. Time for determination by board of ~~commissioners~~ managers. Within thirty days after a hearing required pursuant to this article, or at the earliest opportunity in emergency situations, the ~~water management~~ district shall make a determination on the application. ~~The thirty-day time limit may be extended by the board for complex or unique applications.~~ For complex or unique applications this time limit may be extended by the board of managers.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-16. ~~Determination by water management district~~ Consideration by the state engineer and districts. ~~The determination by the water management district upon a permit application~~ In evaluating a drainage permit application the state

engineer and districts shall ~~include~~ consider the following ~~considerations~~ criteria:

1. Whether the flow or quantity of water to be drained will overburden the ~~drain and receiving~~ watercourse into which the water will be drained.

2. Whether the drainage will flood or adversely affect the lands of lower proprietors.

3. Whether easements ~~acquired are adequate~~ are required.

4. ~~Whether the board has considered oral and written comments and testimony received at the hearing.~~ Whether consideration was given to the water resources policy as contained in North Dakota Century Code section 61-01-26, including the following:

   a. Whether it is shown that there will be a significant decrease in water quality resulting from the proposed drainage project.

   b. Whether, in evaluating the entire watershed, the resultant drainage will significantly increase flooding problems in the watershed.

   c. Whether the permanent storage of water on parcels in the application area is beneficial.

   d. Whether the area's erosion potential will be increased significantly due to the drainage of the water and the subsequent lack of wetlands to retard erosion.

   e. Whether type four and five wetlands as determined by the state engineer from evidence in the record exist in the application area, and if so, those wetlands shall not be drained unless overriding circumstances exist.

   f. Whether the agricultural productivity was considered.

   g. Whether the drainage project will decrease local flooding problems.

   h. Whether fish and wildlife values were considered.

5. ~~Any conditions deemed necessary by the water management district.~~ Any other factors deemed important.

~~6. Any other factors deemed important by the water management district.~~

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13

Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-17. Approval of drainage permit **applications by** ~~water management~~ **district.**

1. Approved Drainage Permit Applications not Involving Drainage of Statewide or Interdistrict Significance. The ~~water management~~ district's approval shall be noted thereon and it shall be a permit to drain. ~~Notice~~ The permit shall be forwarded to the applicant and notice of the ~~board's~~ action of the board of managers shall be forwarded to the state engineer.

2. Approved Drainage Permit Applications Involving Drainage of Statewide or Interdistrict Significance. The ~~water management~~ district's approval shall be noted thereon, and the application, along with the determination, copies of all applicable easements, copies of the publication of notice, and minutes of the public hearing ~~and any meeting relating thereto, and any information used by the board in reaching a determination on the application~~ shall be immediately forwarded to the state engineer. Notice of the ~~board's~~ action of the board of managers shall be forwarded to the applicant.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-18. Denial of application by the district. A denied application shall be returned to the applicant along with a copy of the ~~water management~~ district's determination. A complete copy of the determination shall ~~also~~ be forwarded to the state engineer.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-18.1. Notice by state engineer of public hearing on application of statewide or interdistrict significance. The state engineer, upon receipt of a drainage application that is of statewide or interdistrict significance which has been approved by a district shall hold a public hearing. Notice shall be published in the official newspaper in the county or counties of the proposed drainage once a week for two consecutive weeks. The final published notice shall be published not less than seven days before the hearing date. The notice shall give essential information about the proposed drainage application and set the date and time of the public hearing. All public hearings conducted by the state engineer shall be held at the state engineer's offices in Bismarck.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-04

89-02-01-18.2. Evidence presented at the state engineer's public hearing. The formal rules of evidence shall be waived at the state engineer's public hearing on application to drain, however, the hearing examiner shall accept only testimony that is relevant to the drainage application.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC 28-32-06

89-02-01-19. Consideration by state engineer of applications of statewide or interdistrict significance. The state engineer, upon receipt of an application to drain of interdistrict or statewide significance, which has been approved by a ~~water management~~ district, shall make a determination whether the permit shall be granted, utilizing information ~~received from the water management district~~ from the record compiled at the state engineer's public hearing. The state engineer shall only utilize information contained in the record except as provided by section 89-02-01-20.2. The state engineer, in making the determination, shall consider the criteria contained in section 89-02-01-16. ~~The state engineer may also utilize any other available information. If the state engineer determines that the applicant and the water management district have satisfactorily shown that the proposed drainage satisfies applicable requirements, the state engineer shall approve the permit. If the state engineer is not so satisfied, the state engineer shall either deny the application or return it to the appropriate water management district for reconsideration noting the application's shortcomings thereon. In making the determination, the state engineer shall consider, among other things:~~

~~1. Whether the proposed drainage will adversely affect property owned by the state or a political subdivision.~~

~~2. Whether the water to be drained may overburden an interdistrict watercourse.~~

~~3. Whether the proposed drainage will flood or adversely affect the property of downstream landowners.~~

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-20. Criteria to determine whether drainage will adversely affect lands of lower landowners. The state engineer and the ~~water management~~ district shall be guided by the following criteria:

1. Uncontrolled drainage into receiving watercourses ~~shall be considered to have an adverse effect unless specific data indicates that such receiving watercourse has sufficient capacity to handle the additional flow of water~~ which do not have sufficient capacity to handle the additional flow and quantity of water shall be considered to have an adverse effect.

2. ~~Uncontrolled drainage from a noncontributing watershed, unless otherwise illustrated, shall be considered to have an adverse impact. A noncontributing drainage area, for the purposes of this section, is an area which does not contribute natural flowing surface water to a waterway at an average frequency more often than once in three years over the latest thirty-year period.~~ Whether drainage is accomplished by reasonably improving and aiding the normal and natural system of drainage according to its reasonable carrying capacity, or in the absence of a practical natural drain, a reasonable artificial drain system is adopted.

3. ~~The amount of care taken to avoid unnecessary injury, as determined by the water management district or the state engineer, or both, to the land receiving the drainage.~~ The amount of water proposed to be drained.

4. ~~The drainage is accomplished by reasonably improving and aiding the normal and natural system of drainage according to its reasonable carrying capacity, or in the absence of a practical natural drain, a reasonable artificial drain system is adopted.~~ The design and other physical aspects of the drain.

5. ~~The amount of water proposed to be drained.~~ The impact of sustained flows.

6. ~~The geographical and physical aspects of the drainage area.~~

7. ~~The impact of sustained flows resulting from controlled drainage.~~

8. ~~Exceptions may be authorized by the board of commissioners and state engineer on an individual basis. Factors that will be considered shall be watercourse capacities, control structures,~~

~~drainage area, increased volume of runoff, and environmental impacts. Request for exceptions must be accompanied by a plan satisfactory to the water management district and state engineer.~~

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC 61-01-11, 61-15-08

89-02-01-20.1. Time for determination by the state engineer. Within thirty days of the public hearing on a drainage application the state engineer shall render the determination on the application. For complex or unique applications this time limit may be extended by the state engineer. Following the determination, the state engineer shall notify the parties of record, either personally or by certified mail, of the determination. This notice must be accompanied by the findings of fact and conclusions on which the determination was based and the notice is deemed given as of the date of certification.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC 28-32-13

89-02-01-20.2. Consideration of evidence not contained in the record. The record shall be closed at the conclusion of the state engineer's public hearing. The state engineer may receive testimony and evidence that is not contained in the record. However, the state engineer, before considering any evidence not contained in the record shall transmit the evidence to the parties of record for their examination and comment. Written comment or a request for a supplemental public hearing must be submitted to the state engineer within ten days after transmittal of the additional evidence. If a supplemental public hearing is warranted, ten days notice by certified mail shall be afforded the parties of the record to inform them of the date, time, place, and nature of the hearing. All supplemental hearings shall be held at the state engineer's offices in Bismarck.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC 28-32-07

89-02-01-21. Conditions to permits. The state engineer may require as a condition to ~~any permit~~ the approval of any drainage permit application a postconstruction survey of the permitted drain. ~~Cross-section or profile surveys may be required at points specified by the state engineer.~~ Any permit to which the state engineer has attached such condition will be perfected upon receipt of the survey. The state engineer may attach any other conditions to an approved permit deemed necessary by the state engineer according to the circumstances of each application.

History: Amended effective December 1, 1979; October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC ~~61-01-22,~~ 61-15-08, 61-16.1-41

89-02-01-24. Enforcement action without receipt of complaint. ~~The state engineer may take the enforcement action described in section 89-02-01-23 without the receipt of a complaint if the state engineer has determined that a violation of North Dakota Century Code section 61-01-22 or North Dakota Century Code section 61-15-08 has occurred.~~

General Authority: ~~NDCC 28-32-02, 61-03-13~~
Law Implemented: ~~NDCC 61-01-22, 61-15-08~~

Repealed effective October 1, 1982.

89-02-01-25. Criminal complaint. ~~If the state engineer determines that either North Dakota Century Code section 61-01-22 or North Dakota Century Code section 61-15-08 has been violated, the state engineer may cause a criminal complaint to be filed against the accused.~~

History: ~~Amended effective December 1, 1979.~~
General Authority: ~~NDCC 28-32-02, 61-03-13~~
Law Implemented: ~~NDCC 61-01-22, 61-15-08~~

Repealed effective October 1, 1982.

89-02-01-27. Notice of drainage application denials to commissioner of agriculture. Pursuant to North Dakota Century Code section 61-31-09 the state engineer and districts, upon the denial of an application to drain, shall notify the commissioner of agriculture of any landowner whose wetland was denied a drainage permit. The notification is to inform the commissioner of agriculture of wetlands that may be eligible for inclusion in the state's waterbank program and shall be sent to the commissioner by certified mail not later than ten days after the decision.

History: Effective October 1, 1982.
General Authority: NDCC 28-32-02, 61-03-13
Law Implemented: NDCC 61-31-09