State of Vermont Department of Health

Radioactive Materials Program
Procedure 1.3, Revision 0

License Termination/Revocation

Prepared By: _____ **Date:** _____

Reviewed By: _____ **Date:** _____

Approved By: _____ **Date:** _____

Effective Date:

Commented [MK1]: Suggest referencing NUREG-1757 Volumes 1, 2 and 3 as the primary procedure to use. Use this procedure as a supplement.

Revision	Date	Description of Changes
0		

Radioactive Materials Program Procedure 1. 3, Revision 0

License Termination/Revocation

Table of Contents

Section

License Termination/Revocation

1.0 PURPOSE

1.1 Applicability

1.1.1 This procedure defines the process for terminating a license granted by the Vermont Department of Health (Department) to possess, use, store and, dispose of licensed radioactive material.

1.1.2 This procedure applies to the disposal of licensed material, decommissioning of the site and facilities, and surveys adequate to demonstrate that the premises are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E; ~~residual radioactivity is within regulatory limits at such time that a license is terminated~~.

1.2 References

1.2.1 Vermont Radioactive Materials Rule.

1.2.2 Title 10 Code of Federal Regulations, Part 20, Subpart E - Radiological Criteria for License Termination.

1.2.3 NUREG-1575, "Multi-Agency Radiation Survey and Site Investigation Manual" (MARSSIM).

1.2.4 NUREG-1757, "Consolidated Decommissioning Guidance" Volumes 1, 2 and 3 Revision 2.

~~1.2.5~~ The various RESRAD programs: (e.g., Dose Modeling Code (Soil Concentration Levels); ~~.~~

~~1.2.7~~1.2.5 RESRAD-Build, Dose Modeling Code (Buildings); RESRAD-OFFSITE).

Add DandD code

1.3 Files

The following records will be maintained by the Radioactive Materials Program, primarily in an electronic format, for each licensee:

1.3.1 Specific license.

1.3.2 License termination request document.

Commented [MK2]: Everyone forgets that they need to return the financial assurance when a license is terminated. You will need to use all 3 volumes.

Commented [MK3]: This procedure can be simplified into one sentence: the license reviewer will follow NUREG-1757. You can get rid of everything else.

Formatted: Indent: Left: 0", Tab stops: Not at 2"

Formatted: Indent: Left: 0", Hanging: 1", Outline numbered + Level: 3 + Numbering Style: 1, 2, 3, … + Start at: 1 + Alignment: Left + Aligned at: 1.5" + Tab after: 2" + Indent at: 2", Tab stops: 1.5", List tab + Not at 2"

1.3.3 License termination letter.

1.3.5 Requests for Additional Information (RAI).

1.3.6 **VDH Form 314 Certificate of Disposition of Materials**

1.4 Definitions

1.4.2 ALARA. Acronym for "as low as is reasonably achievable," which means making every reasonable effort to maintain exposures to radiation as far below the dose limits as is practical, consistent with the purpose for which the licensed activity is undertaken, and taking into account the state of technology, the economics of improvements in relation to the state of technology, the economics of improvements in relation to the benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest (see 10 CFR 20.1003).

Background Radiation: Radiation from cosmic sources, naturally occurring radioactive materials, including radon, except as a decay product of source or special nuclear material and including global fallout as it exists in the environment from the testing of nuclear explosive devices or from past nuclear accidents, such as Chernobyl, that contribute to background radiation and are not under the control of a licensee or registrant. "Background radiation" does not include sources of radiation from radioactive materials regulated by the Department.

Certification Amount of Financial Assurance. See prescribed amount of financial assurance.

Certification of Financial Assurance. The document submitted to certify that financial assurance has been provided as required by regulation.

Characterization survey. A type of survey that includes facility or site sampling, monitoring, and analysis activities to determine the extent and nature of residual radioactivity. Characterization surveys provide the basis for acquiring necessary technical information to develop, analyze, and select appropriate cleanup techniques.

Cleanup. See decontamination.

Closeout Inspection. An inspection performed by NRC, or its contractor, to determine if a licensee has adequately decommissioned its facility. Typically, a closeout inspection is performed after the licensee has demonstrated that its facility is suitable for release in accordance with

NRC requirements.

Confirmatory Survey. A survey conducted by NRC, or its contractor, to verify the results of the licensee's final status survey. Typically, confirmatory surveys consist of measurements at a fraction of the locations previously surveyed by the licensee, to determine whether the licensee's results are valid and reproducible.

1.4.3 Critical Group: The group of individuals reasonably expected to receive the greatest exposure to radiation for any applicable set of circumstances.

DandD code. The Decontamination and Decommissioning (DandD) software package, developed by NRC, that addresses compliance with the dose criteria of 10 CFR 20, Subpart E. Specifically, DandD embodies NRC's guidance on screening dose assessments to allow licensees to perform simple estimates of the annual dose from residual radioactivity in soils and on building surfaces.

1.4.4 Decommission: To remove a facility or site safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the license.

Decommission Funding Plan (DFP). A document that contains a site-specific cost estimate for decommissioning, describes the method for assuring funds for decommissioning, describes the means for adjusting both the cost estimate and funding level over the life of the facility, and contains the certification of financial assurance and the signed originals of the financial instruments provided as financial assurance.

Decommissioning Groups. For the purposes of this guidance document, the categories of decommissioning activities that depend on the type of operation and the residual radioactivity.

Decommissioning Plan (DP). A detailed description of the activities that the licensee intends to use to assess the radiological status of its facility, to remove radioactivity attributable to licensed operations at its facility to levels that permit release of the site in accordance with NRC's regulations and termination of the license, and to demonstrate that the facility meets NRC's requirements for release. A DP typically consists of several interrelated components, including (1) site characterization information; (2) a remediation plan that has several components, including a description of remediation tasks, a health and safety plan, and a quality assurance plan; (3) site-specific cost estimates for the decommissioning; and (4) a final status survey plan (see 10 CFR 30.36(g)(4).

Decontamination. The removal of undesired residual radioactivity from facilities, soils, or equipment prior to the release of a site or facility and termination of a license. Also known as remediation, remedial action, and cleanup.

Derived Concentration Guideline Levels (DCGLs). Radionuclide-specific concentration limits used by the licensee during decommissioning to achieve the regulatory dose standard that permits the release of the property and termination of the license. The DCGL applicable to the average concentration over a survey unit is called the DCGLW. The DCGL applicable to limited areas of elevated concentrations within a survey unit is called the DCGLEMC.

~~1.4.5~~ Distinguishable from Background: The detectable concentration of a radionuclide is statistically different from the background concentration of that radionuclide in the vicinity of the site, or in the case of structures, in similar materials using adequate measurement technology, survey, and statistical techniques.

1.4.5
2 Dose (or radiation dose). A generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, or total effective dose equivalent, as defined in other paragraphs of 10 CFR 20.1003 (see 10 CFR 20.1003). In this NUREG report, dose generally refers to total effective dose equivalent (TEDE).

Effluent. Material discharged into the environment from licensed operations.

Environmental Monitoring. The process of sampling and analyzing environmental media in and around a facility (1) to confirm compliance with performance objectives and (2) to detect radioactive material entering the environment to facilitate timely remedial action.

Exposure Pathway. The route by which radioactivity travels through the environment to eventually cause radiation exposure to a person or group.
Exposure Scenario. A description of the future land uses, human activities, and behavior of the natural system as related to a future human receptor's interaction with (and therefore exposure to) residual radioactivity. In particular, the exposure scenario describes where humans may be exposed to residual radioactivity in the environment, what exposure group habits determine exposure, and how residual radioactivity moves through the environment.

External Dose. That portion of the dose equivalent received from radiation sources outside the body (see 10 CFR 20.1003).

Formatted: Font: (Default) Times New Roman, 12 pt

Formatted: Font: (Default) Times New Roman, 12 pt

Formatted: Normal, Indent: Left: 1"

Final Status Survey (FSS). Measurements and sampling to describe the radiological conditions of a site or facility, following completion of decontamination activities (if any) and in preparation for release of the site or facility.

Final Status Survey Plan (FSSP). The description of the final status survey design.

Final Status Survey Report (FSSR). The results of the final status survey conducted by a licensee to demonstrate the radiological status of its facility. The FSSR is submitted to NRC for review and approval.

Financial Assurance. A guarantee or other financial arrangement provided by a licensee that funds for decommissioning will be available when needed. This is in addition to the licensee's regulatory obligation to decommission its facilities.

Financial Assurance Mechanism. Financial instruments used to provide financial assurance for decommissioning.

Ground Water. Water contained in pores or fractures in either the unsaturated or saturated zones below ground level.

Hydraulic Conductivity. The volume of water that will move through a medium in a unit of time under a unit hydraulic gradient through a unit area measured perpendicular to the direction of flow.

Hydrology. Study of the properties, distribution, and circulation of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere.

Impact. The positive or negative effect of an action (past, present, or future) on the natural environment (land use, air quality, water resources, geological resources, ecological resources, aesthetic and scenic resources) and the human environment (infrastructure, economics, social, and cultural).

Impacted Areas. The areas with some reasonable potential for residual radioactivity in excess of natural background or fallout levels (see 10 CFR 50.2).

Inactive Outdoor Area. The outdoor portion of a site not used for licensed activities or materials for 24 months or more.

Infiltration. The process of water entering the soil at the ground surface. Infiltration becomes percolation when water has moved below the depth at

which it can be removed (to return to the atmosphere) by evaporation or transpiration.

Institutional Controls. Measures to control access to a site and minimize disturbances to engineered measures established by the licensee to control the residual radioactivity.

Institutional controls include administrative mechanisms (e.g., land use restrictions) and may include, but are not limited to, physical controls (e.g., signs, markers, landscaping, and fences).

Karst. A type of topography that is formed over limestone, dolomite, or gypsum by dissolution, characterized by sinkholes, caves, and underground drainage.

Leak Test. A test for leakage of radioactivity from sealed radioactive sources. These tests are made when the sealed source is received and on a regular schedule thereafter. The frequency is usually specified in the sealed source and device registration certificate and/or license.

License Termination Rule (LTR). The License Termination Rule refers to the final rule on "Radiological Criteria for License Termination," published by NRC as Subpart E to 10 CFR 20 on July 21, 1997 (62 FR 39058).

Licensee. A person who possesses a license, or a person who possesses licensable material, who NRC could require to obtain a license.

~~1.4.6~~2.4.4 License Review: The processing of any licensing action (i.e., new application, amendment, renewal, termination) and serves two capacities – primary review and secondary review.

~~1.4.7~~2.4.5 License Reviewer: A Radiologic Health Specialist or other Radioactive Materials Program staff member qualified to review, process, and document a specific category of licensing action. A license reviewer shall not perform a review for any category of license for which they are not qualified.

~~1.4.8~~2.4.6 License Revocation: A license is revoked during its effective validity period for cause, usually for failure to comply with licensing requirements and applicable regulations. NOTE: The Department must take formal action in order to revoke a license under 18 V.S.A. § 1655, 18 V.S.A. §§ 126 & 127, 10 CFR 30.61, 10 CFR 40.71, and 10 CFR 70.81.

~~1.4.9~~2.4.7 License Termination: A license is terminated because the licensee has allowed the license to expire, did not respond after being informed that

the license had expired, and/or did not request that the license be renewed.

Commented [MK4]: Not true. This is when a license has expired. We don't terminate until we know that the premises are suitable for unrestricted release.

MARSSIM. The Multi-Agency Radiation Site Survey and Investigation Manual (NUREG–1575) is a multi-agency consensus manual that provides information on planning, conducting, evaluating, and documenting building surface and surface soil final status radiological surveys for demonstrating compliance with dose- or risk-based regulations or standards.

Model. A simplified representation of an object or natural phenomenon. The model can be in many possible forms, such as a set of equations or a physical, miniature version of an object or system constructed to allow estimates of the behavior of the actual object or phenomenon when the values of certain variables are changed. Important environmental models include those estimating the transport, dispersion, and fate of chemicals in the environment.

Monitoring. Monitoring (radiation monitoring, radiation protection monitoring) is the measurement of radiation levels, concentrations, surface area concentrations, or quantities of radioactive material and the use of the results of these measurements to evaluate potential exposures and doses (see 10 CFR 20.1003).

mrem/y (millirem per year). One one-thousandth (0.001) of a rem per year. (See also sievert.)

Naturally Occurring Radioactive Material (NORM). The natural radioactivity in rocks, soils, air and water. NORM generally refers to materials in which the radionuclide concentrations have not been enhanced by or as a result of human practices. NORM does not include uranium or thorium in source material.

Non-impacted Areas. The areas with no reasonable potential for residual radioactivity in excess of natural background or fallout levels.

Pathway. See exposure pathway.

Performance-Based Approach. Regulatory decision-making that relies upon measurable or calculable outcomes (i.e., performance results) to be met, but provides more flexibility to the licensee as to the means of meeting those outcomes.

Permeability. The ability of a material to transmit fluid through its pores when subjected to a difference in head (pressure gradient). Permeability depends on the substance transmitted (oil, air, water, and so forth) and on the size and shape of the pores, joints, and fractures in the medium and the

manner in which they are interconnected.

Porosity. The ratio of openings, or voids, to the total volume of a soil or rock expressed as a decimal fraction or as a percentage.

Potentiometric Surface. The two-dimensional surface that describes the elevation of the water table. In an unconfined aquifer, the potentiometric surface is at the top of the water level. In a confined aquifer, the potentiometric surface is above the top of the water level because the water is under confining pressure.

Prescribed Amount of Financial Assurance. An amount of financial assurance based on the authorized possession limits of the NRC license, as specified in 10 CFR 30.35(d), 40.36(b), or 70.25(d).

Principal Activities. Activities authorized by the license which are essential to achieving the purpose(s) for which the license was issued or amended. Storage during which no licensed material is accessed for use or disposal and activities incidental to decontamination or decommissioning are not principal activities (see 10 CFR 30.4).

Probabilistic. Refers to computer codes or analyses that use a random sampling method to select parameter values from a distribution. Results of the calculations are also in the form of a distribution of values. The results of the calculation do not typically include the probability of the scenario occurring.

Reasonable Alternatives. Those alternatives that are practical or feasible from a technical and economic standpoint.

Reasonably foreseeable land use. Land use scenarios that are likely within 100 years, considering advice from land use planners and stakeholders on land use plans and trends.

rem. The special unit of any of the quantities expressed as dose equivalent. The dose equivalent in rems is equal to the absorbed dose in rads multiplied by the quality factor (1 rem = 0.01 sievert) (see 10 CFR 20.1004).

Remedial Action. See decontamination.

Remediation. See decontamination.

2.4.8 Residual Radioactivity: Radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's control. This includes radioactivity from all licensed and

unlicensed sources used by the licensee but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental release of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of 10 CFR 20.2001.

Formatted: Font: Not Bold, Not Italic

~~1.4.10~~2.4.9

RESRAD Code. A computer code developed by the U.S. Department of Energy and designed to estimate radiation doses and risks from RESidual RADioactive materials in soils.

RESRAD-BUILD Code. A computer code developed by the U.S. Department of Energy and designed to estimate radiation doses and risks from RESidual RADioactive materials in BUILDings.

Restricted Area. Any area to which access is limited by a licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials (see 10 CFR 20.1003).

Risk. Defined by the "risk triplet" of a scenario (a combination of events and/or conditions that could occur) or set of scenarios, the probability that the scenario could occur, and the consequence (e.g., dose to an individual) if the scenario were to occur.

Risk-Based Approach. Regulatory decision making that is based solely on the numerical results of a risk assessment. (Note that the Commission does not endorse a risk-based regulatory approach.)

Risk-Informed Approach. Regulatory decision making that represents a philosophy whereby risk insights are considered together with other factors to establish requirements that better focus licensee and regulatory attention on design and operational issues commensurate with their importance to public health and safety.

Risk Insights. Results and findings that come from risk assessments.

Robust engineered barrier. A man-made structure that is designed to mitigate the effect of natural processes or human uses that may initiate or accelerate release of residual radioactivity through environmental pathways. The structure is designed so that the radiological criteria for license termination (10 CFR 20, Subpart E) can be met. Robust engineered barriers are designed to be more substantial, reliable, and sustainable for the time period needed without reliance on active ongoing maintenance.

Saturated Zone. That part of the earth's crust beneath the regional water table in which all voids, large and small, are ideally filled with water under pressure greater than atmospheric.

Scoping Survey. A type of survey that is conducted to identify (1) radionuclide contaminants, (2) relative radionuclide ratios, and (3) general levels and extent of residual radioactivity.

Screening Approach/Methodology/Process. The use of (1) predetermined building surface concentration and surface soil concentration values, or (2) a predetermined methodology (e.g.,

use of the DandD code) that meets the radiological decommissioning criteria without further analysis, to simplify decommissioning in cases where low levels of residual radioactivity are achievable.

Sealed Source. Any special nuclear material or byproduct material encased in a capsule designed to prevent leakage or escape of the material.

sievert (Sv). The SI unit of any of the quantities expressed as dose equivalent. The dose equivalent in sieverts is equal to the absorbed dose in grays multiplied by the quality factor (1 sievert = 100 rem) (see 10 CFR 20.1004).

Site. The area of land, along with structures and other facilities, as described in the original Department license application, plus any property outside the originally licensed boundary added for the purpose of receiving, possessing, or using radioactive material at any time during the term of the license, as well as any property where radioactive material was used or possessed that has been released prior to license termination.

Site Characterization. Studies that enable the licensee to sufficiently describe the conditions of the site, separate building, or outdoor area to evaluate the acceptability of the decommissioning plan.

Site Characterization Survey. See characterization survey.

Site-Specific Dose Analysis. Any dose analysis that is done other than by using the default screening tools.

Smear. A radiation survey technique which is used to determine levels of removable surface contamination. A medium (typically filter paper) is rubbed over a surface (typically of area 100 cm^2), followed by a quantification of the activity on the medium. Also known as a swipe.

Formatted: Superscript

Source Material. Uranium or thorium, or any combination of uranium and thorium, in any physical or chemical form, or ores that contain by weight one-twentieth of one percent (0.05 percent) or more of uranium, thorium, or any combination of uranium and thorium. Source material does not include special nuclear material (see 10 CFR 20.1003).

Source Term. A conceptual representation of the residual radioactivity at a site or facility.

Special Nuclear Material. (1) Plutonium, uranium-233 (U-233), uranium enriched in the isotope 233 or in the isotope 235, and any other material that the Commission, pursuant to the provisions of Section 51 of the Atomic Energy Act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing but does not include source material (see 10 CFR 20.1003).

Specific Licenses. Licenses issued to a named person who has filed an application for the license under the provisions of 10 CFR Parts 30, 32 through 36, 39, 40, 61, and 70. Examples of specific licenses are industrial radiography, medical use, irradiators, and well logging.

Survey. An evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation. When appropriate, such an evaluation includes a physical survey of the location of radioactive material and measurements or calculations of levels of radiation, or concentrations orquantities of radioactive material present (see 10 CFR 20.1003).

Survey Unit. A geographical area consisting of structures or land areas of specified size and shape at a site for which a separate decision will be made as to whether or not the unit attains the site-specific reference-based cleanup standard for the designated pollution parameter. Survey units are generally formed by grouping contiguous site areas with similar use histories and having the same contamination potential (classification). Survey units are established to facilitate the survey process and the statistical analysis of survey data.

Technologically Enhanced Naturally Occurring Radioactive Material (TENORM). Naturally occurring radioactive material with radionuclide concentrations increased by or as a result of past or present human practices. TENORM does not include background radioactive material or the natural radioactivity of rocks and soils. TENORM does not include uranium or thorium in source material.

Timeliness. Specific time periods stated in NRC regulations for decommissioning unused portions of operating nuclear materials facilities and for decommissioning the entire site upon termination of operations.

Total Effective Dose Equivalent (TEDE). The sum of the deep-dose equivalent (for external exposures) and the committed effective dose equivalent (CEDE) (for internal exposures) (see 10 CFR 20.1003).

Transmissivity. The rate of flow of water through a vertical strip of aquifer which is one unit wide and which extends the full saturated depth of the aquifer.

Unrestricted Area. An area, access to which is neither limited nor controlled by the licensee (see 10 CFR 20.1003).

Unsaturated Zone. The subsurface zone in which the geological material contains both water and air in pore spaces. The top of the unsaturated zone typically is at the land surface, otherwise known as the vadose zone.

Vadose Zone. See unsaturated zone.

~~1.4.11~~2.4.10 Voluntary termination: a licensee has requested that a license be terminated.

Commented [MK5]: Would this mean that an involuntary termination is a revocation? If so, do you want to define "revocation?"

2.0 RESPONSIBILITIES

2.1 Radiological Health Specialist

2.1.1 Identifies licenses that have expired or are about to expire and notifies the Radioactive Materials Program Manager (RMPM) within 30 days of the license expiration date.

2.1.2 Issues~~Sends out~~ acknowledgment letters for receipt of termination requests within 30 days of receipt of the request for termination.

2.1.3 Maintains computer-based and other licensing files.

2.1.4 Processes requests for license termination or expired licenses as assigned within a 15-day period, upon the notification of the license expiration date.

2.1.5 When required, conducts final decommissioning surveys or oversees contractors that are conducting final decommissioning surveys for licensees who are or will be decommissioning their facility.

2.2 Radioactive Materials Program Manager (RMPM)

2.2.1 Assigns a request for license termination or an expired license to a Radiological Health Specialist (RHS) for processing. The RMPM will instruct the RHS in the required scope of the termination or expired license process, i.e., whether the licensee is required to submit a ~~License Termination Plan (LTP)~~Decommissioning Plan.

2.2.2 In concert with the Department of Health Legal Division, initiates a petition for revocation of the license or other sanction, when deemed necessary to protect the public health and the environment.

2.3 Radiation Control Program Director

2.3.1 Reviews, concurs or does not concur, with the petition for revocation of the license or other sanctions after consultation with the Environmental Health Division Director and Department legal advisors.

2.3.2 Reviews, approves, and signs terminated license letters.

2.3.3 Approves the implementation of a revocation action and signs the final order.

3.0 PROCEDURE

3.1 General Provisions

3.1.1 The criteria for termination of a license are listed in 10 CFR 30.36, 40.42, and 70.38 as well as the Vermont Radioactive Materials Rule.

Commented [MK6]: Don't you also send the licensee a reminder that their license will soon expire?

Commented [MK7]: This sounds like the license reviewer has to do the whole thing in 15 days. Please re-word.

Commented [MK8]: The regulator does not survey for the licensee. The regulator performs closeout surveys to verify that the licensee survey data is accurate and supports the finding that the license can be terminated (suitable for decommissioning iaw 10 CFR Part 20 subpart E).

3.2 Request for Termination

3.2.1 Within 15 working days following the receipt of the request for license termination, the notice is placed in the licensee file and the reviewer should prepare a termination letter and inform the licensee that the Radioactive Materials Program may request additional information.

3.2.2 Following the receipt of a request for termination, a determination of the potential for residual radioactive contamination of the facility shall be made. The license and inspection history shall be reviewed to determine the potential risk of residual radioactive contamination.

3.2.3 The highest risk would be licensees that utilize significant quantities of unsealed radioactive material with half-lives greater than 120 days such as, but not limited to, nuclear pharmacies; waste disposal processing and repackaging services; manufacturing and distribution; nuclear laundries; academic or medical Type A Broad; and research and development, Type A Broad licenses. The lowest risk would be licensees that utilize radioactive materials only in the form of sealed sources. Unless there has been a significant leak of a sealed source, the probability of residual contamination is essentially zero. (NOTE: However, there have been a number of cases of residual contamination resulting from melting sealed sources contained in measuring gauges.)

3.2.4 For licenses that authorize both sealed and unsealed sources of radioactive material, the highest risk use shall dictate the decommissioning process.

3.3 License Termination - Sealed Sources

Commented [MK9]: You can replace this with: determine which decommissioning group applies and follow the guidance in NUREG-1757 Volume 1.

3.3.1 Upon receipt of a request for termination of a license that authorizes the possession and use of radioactive materials only in the form of sealed sources, the following information shall be requested from the licensee:

- A listing of sealed sources currently or last possessed including type, isotope, quantity, serial number, vendor, date received, and use;
- Copies of the results of the most recent leak tests for each sealed source, if appropriate;
- Copies of the records of disposal, decay, or transfer to an authorized recipient for each sealed source;
- Disposition of sealed sources that were found to have leaked and the areas affected;

- Copies of periodic inventories, if appropriate;
- If appropriate, a copy of the results of the final survey of the area where sources were used and stored. The record shall include the type of instrument used and the last calibration date, model, and serial number, where measurements were taken on a room diagram as per 10 CFR 20.1501; and
- A properly completed **VDH Form 314 Certificate of Disposition of Radioactive Materials**.

3.3.2 For sealed sources that have never leaked, the following information shall be requested from the licensee:

- A listing of sealed sources currently or last possessed including type, isotope, quantity, serial number, vendor, date received, and use;
- Copies of leak test results indicating that the source(s) did not leak;
- Copies of periodic inventories, if appropriate;
- A properly completed **VDH Form 314 Certificate of Disposition of Radioactive Materials**.

3.4 License Termination - Unsealed Sources

Commented [MK10]: You can replace this with: determine which decommissioning group applies and follow the guidance in NUREG-1757 Volume 1.

3.4.1 Upon receipt of a request for termination of a license that authorizes the possession and use of any radioactive materials in unsealed form, the licensee shall be requested to submit the following information:

- A listing of licensed radioactive materials currently or last possessed including type, isotope and quantity, vendor, date received, and use;
- Copies of the records of disposal, decay, or transfer to an authorized recipient, for each radioactive material listed;
- Copies of periodic inventories, if appropriate;
- A copy of the results of the final survey of the area where radioactive materials were used and stored. The record must include the type of instrument(s) used and the last calibration dates;
- A properly completed **VDH Form 314 Certificate of Disposition of Radioactive Materials**; and

- For licensees who possessed and used relatively short-lived radioactive material (i.e., half-life less than or equal to 120 days) in an unsealed form and, within timeliness constraints, the maximum activity authorized under the license has decayed to less than the quantity specified in 10 CFR Part 20, Appendix C, **and** the licensee's survey, performed in accordance with 10 CFR 30.36, 40.42, or 70.38 does not identify any residual levels of radiological contamination greater than decommissioning.

Commented [MK11]: This word is bolded in NUREG-1757 Vol 1

Formatted: Font: Bold

Transfer the decommissioning records discussed in 10 CFR 30.35, 30.36, and 30.51; 40.36, 40.42, and 40.61; 70.25, 70.38, and 70.51; or 72.80, as appropriate, or affirm that they are not required to retain or transfer these records.

3.4.2 If the above information when compared to the license and the inspection history appears to be accurate and complete, and with the exception of sealed sources, the licensee has not possessed radioactive material with a half-life greater than 120 days, the license shall be terminated.

3.4.3 If the information is incomplete, appears to be inaccurate, the final survey revealed radioactive contamination, or the licensee has possessed unsealed radioactive material with a half-life greater than 120 days, an inspection of the facility shall be conducted.

3.4.5 If the inspection reveals that all radioactive material has been properly disposed of and an independent survey, conducted by the RMP staff or a contractor authorized by the RMP, reveals no residual activity, the license shall be terminated. However, if items of noncompliance were noted during the inspection, at the discretion of the Department, enforcement action shall be taken prior to license termination.

3.4.6 If survey results reveal possible residual activity, the licensee shall be requested to submit a sufficient License Termination Plan (LTP) such that the facility will be decontaminated to levels acceptable for unrestricted use. NUREG 1757 Volume 1 Rev 2 "Consolidated Decommissioning Guidance" can be used by the Radioactive Materials Program to evaluate the LTP. In addition, other guidance and/or modeling codes may address specific issues and may be used as needed (see sub-Section 1.2 of this procedure for RESRAD codes that may be of help).

Remember to return Financial Assurance.

3.5 Expired License

3.5.1 Licensee Contacted.

3.5.1.1 Within fifteen (15) working days following the expiration date of a

license without the receipt of a request for license termination or license renewal, the licensee shall be contacted by telephone or in person and informed that the license has expired. The licensee shall be informed, in writing, that any activity using radioactive material under the license shall cease, the licensed material shall be placed in storage or disposed of, and an application for license termination shall be submitted within 30 days.

3.5.1.2 If the licensee intends to continue licensed operations and states that the failure to submit an application for license renewal was ~~just~~ an oversight, the licensee shall be informed that operations shall cease and that an application for license renewal should be submitted as ~~quickly~~ soon as possible. The licensee shall be informed that operation without a current *valid* license constitutes noncompliance and that appropriate enforcement action will result.

3.5.1.3 The licensee shall be informed that only the RMPM may authorize continued use of radioactive material without a current license.

3.5.1.4 The notice to cease licensed activities shall be recorded and transmitted to the licensee by registered mail, return receipt requested (Attachment 1.2-1 **Sample Letter for Expired License** of RMPP 1.2 *Renewal of Licenses*). This notification to the licensee transmits the requirements for the proper disposition of radioactive materials with a **VDH Form 314** (Attachment 1.3-1) attached.

3.5.2 Licensee Not Contacted.

3.5.2.1 Returned, undeliverable mail to licensees must trigger an immediate follow-up. The follow-up must include a telephone call, email, or site visit to the licensee to verify the licensee's physical address.

3.5.2.2 If the licensee cannot be contacted either by telephone, visit to the address on the license, or all other reasonable efforts, the authorized place of use shall be inspected and surveyed. All possible means must be taken to establish the facts associated with the loss of contact, including interviews of related parties like landlords, neighboring parties, or vendors. A survey for radiation and radioactive materials must also be conducted of premises left abandoned. If no radioactive materials are found and the survey indicates the facility is free of radioactive contamination, necessary legal action must proceed in order to revoke the license.

3.5.2.3 If residual contamination is discovered, the facility shall be

restricted from unauthorized access and decontaminated to acceptable levels and the license revoked in accordance with 18 V.S.A. § 1653 (b) (7) (B). All legal efforts to require this of the licensee shall be exhausted before taking other actions. Consult with Department of Health Legal about these and all other steps.

3.5.2.4 If there was an emergency, the Department could use a Health Order (or Emergency Health Order) 18 V.S.A. § 126 (or § 127) to mitigate or force the mitigation of the hazard. If the Department incurred any cost as a result of this action, it has the authority to seek the recovery of costs under our civil enforcement statute. 18 V.S.A. § 130 (b) (5).

4.0 RECORDS

4.1 Records to be Maintained

4.1.1 Terminated License File.

4.1.2 Licensee Correspondence Requesting Termination.

Transfer the decommissioning records discussed in 10 CFR 30.35, 30.36, and 30.51; 40.36,
40.42, and 40.61; 70.25, 70.38, and 70.51; or 72.80, as appropriate, or affirm that they are not
required to retain or transfer these records.

~~4.1.2~~4.1.3

~~4.1.3~~4.1.4 License Termination Letter.

~~4.1.4~~4.1.5 **VDH Form 314 Certificate of Disposition of Radioactive Materials.**

4.2 Records Retention

4.2.1 Web Based Licensing is the primary electronic file repository.

4.2.2 Records may also be kept in other secure electronic forms with access only to RMP staff.

5.0 ATTACHMENT TO RMPP 1.3

1.3-1 **VDH Form 314, Certificate of Disposition of Radioactive Materials**

Formatted: Font: (Default) Times New Roman, 12 pt

Formatted: Indent: Left: 0.5", Space After: 8 pt, Line spacing: Multiple 1.08 li, No bullets or numbering, Widow/Orphan control

Formatted: Indent: Left: 0.25", No bullets or numbering