

Licensing Guidance for the Intraocular Use of NeoVista, Inc.'s Epi-Rad₉₀TM (Strontium-90) Ophthalmic System

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Licensing Guidance

The NeoVista Epi-Rad₉₀TM Epiretinal Ophthalmic System is an ophthalmic device used for intraocular treatment by means of high dose rate focal delivery of radiation (i.e., strontium-90) to target tissues. The design and operation is significantly different from that of strontium-90 (Sr-90) superficial eye applicators that are currently regulated under 10 CFR 35.400, "Use of sources for manual brachytherapy." As such, the NRC has determined that the intraocular use of the NeoVista Epi-Rad₉₀TM System is regulated under the provisions of 10 CFR 35.1000, "Other medical uses of byproduct material or radiation from byproduct material."

Consistent with the direction in 10 CFR 35.1000, the NRC has evaluated these devices and determined that licensees must use these devices in accordance with the following requirements which will be incorporated into the license either through license condition or through incorporation by reference to licensee submittals that include commitments consistent with these requirements.

This guidance represents an acceptable means of complying with regulations that apply to the NeoVista Epi-Rad₉₀TM System and is not intended to be the only means of satisfying requirements for a license. Therefore, the applicant may, unless the information is specifically required by regulation, submit alternative commitments for review by the NRC staff to determine whether the regulatory requirements are met. In addition, the commitments pertaining to the NeoVista Epi-Rad₉₀TM System that are incorporated into the applicant's license, either through license condition or through incorporation by reference to licensee submittals, will be reviewed during routine inspections.

Applicants are reminded that licenses issued pursuant to 10 CFR 35.1000 must still meet the general requirements in 10 CFR Part 35, Subparts A, B, C, L, and M. In most cases, the requirements for manual brachytherapy devices in 10 CFR Part 35 Subpart F also apply for the NeoVista Epi-Rad₉₀TM System. However, in other cases, departures from the requirements are needed to address the NeoVista Epi-Rad₉₀TM System's unique features and operations.

Sensitive Security Related Information

Certain sensitive security related information, such as information about significant quantities and locations of radioactive materials at licensed facilities, is not released to the public by NRC. Submission of this type of information in an application must be marked as specified in Regulatory Issues Summary 2005-31, available at <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/reg-issues/2005/ri200531.pdf>. This website also provides additional information on procedures for handling and marking security related information and any updates are available at <http://www.nrc.gov/reading-rm/sensitive-info.html>.

General

Radionuclides, Form, Possession Limits, and Purpose of Use

The applicant must identify the radionuclide(s), chemical/physical form, maximum possession limit, and purpose of use. For example, the following provides the format for an acceptable request:

Authorization 6: Strontium-90/Yttrium-90

Authorization 7: Sealed sources (manufacturer and model number, e.g., QSA Global GmbH Model SICW.3)

Authorization 8: 15 mCi per source; 30 mCi total

Authorization 9: For medical use in the NeoVista Epi-Rad₉₀TM Model R2.3 Applicator Device permitted by 10 CFR 35.1000

Facility Address and Description: [10 CFR 30.33(a)(2) and 10 CFR 35.12(b)(1)]

The applicant must provide an address of use, facility diagram and a description of the location(s) where the Epi-Rad₉₀TM System will be used and stored.

Training and Experience (T&E) for Authorized Individuals

NRC has determined that the individuals meeting the guidance below will be considered qualified and authorized for intraocular use of the NeoVista Epi-Rad₉₀TM System. Applicants may also submit alternative T&E commitments to be reviewed on a case-by-case basis by NRC staff. The alternative information should include an explanation as to why the applicant believes the alternative information demonstrates that the individual is qualified to be an authorized individual.

If the NRC staff revises the T&E criteria, individuals who were authorized for the NeoVista Epi-Rad₉₀TM System under these criteria or previous criteria, do not have to meet the revised criteria.

Authorized User (AU)

There are two categories of AUs for the medical use of the NeoVista Epi-Rad₉₀TM System. The type of AU will be identified on the license by license condition.

- 1) An AU using the U.S. Food and Drug Administration-approved Investigational Device Exemption procedure of 24 gray for the treatment of age-related macular degeneration (hereafter called the “standard protocol”) should complete the minimum number of hours of classroom and laboratory training and the supervised clinical training to include all of the topics described in paragraphs (b)(1) and (b)(2) of 10 CFR 35.491, “Training for ophthalmic use of strontium-90,” specifically for the NeoVista Epi-Rad₉₀TM System.
- 2) An AU for medical uses of the NeoVista Epi-Rad₉₀TM System other than the standard protocol should meet the T&E requirements in 10 CFR 35.490, “Training for use of manual brachytherapy sources;” or 10 CFR 35.690, “Training for use of remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units;” or the requirements in § 35.57.

Both categories of AUs and involved non-AU retinal surgeons should additionally receive training in the operation, safety procedures, and clinical use of the NeoVista Epi-Rad₉₀TM System. This training should include hands-on device operation commensurate with the individuals’ duties. This training requirement may be satisfied by satisfactory completion of a training program provided by the NeoVista Epi-Rad₉₀TM System vendor; or by receiving training supervised by an AU or authorized medical physicist (AMP), as appropriate, who is authorized for the NeoVista Epi-Rad₉₀TM System.

The applicant must submit documentation for all of the above T&E for each AU of the NeoVista Epi-Rad₉₀TM System. NRC Form 313A (AUS), “Authorized User Training and Experience and Preceptor Attestation (for uses defined under 35.400 and 35.600) [10 CFR 35.490, 35.491, and 35.690],” or other formats which capture equivalent information may be used to document T&E.

Note: NRC will not require physicians seeking authorization for the NeoVista Epi-Rad₉₀TM System to obtain a preceptor statement for the use of this device.

Authorized Medical Physicist (AMP)

An AMP for the medical use of the NeoVista Epi-Rad₉₀TM System should meet the T&E requirements in 10 CFR 35.51, “Training for an authorized medical physicist;” or the definition of *authorized medical physicist* in 10 CFR 35.2, “Definitions;” or the requirements in § 35.57.

The AMP must receive training in the operation, safety procedures, and clinical use of the NeoVista Epi-Rad₉₀TM System that includes hands-on device operation. This training requirement may be satisfied by satisfactory completion of a training program provided by the NeoVista Epi-Rad₉₀TM System vendor and/or by receiving training supervised by an AMP authorized for the NeoVista Epi-Rad₉₀TM System.

The applicant must submit documentation for all of the above T&E for each AMP of the NeoVista Epi-Rad₉₀TM System. NRC Form 313A (AMP), “Authorized Medical Physicist Training and Experience and Preceptor Attestation [10 CFR 35.51],” or other formats which capture equivalent information may be used to document T&E.

Note: NRC will not require medical physicists seeking authorization for the NeoVista Epi-Rad₉₀TM System to obtain a preceptor statement for the use of this device.

Radiation Safety Officer (RSO)

An RSO with responsibility for the NeoVista Epi-Rad₉₀TM System must meet the T&E requirements in 10 CFR 35.50, "Training for Radiation Safety Officer;" or the definition of *radiation safety officer* in 10 CFR 35.2, "Definitions;" or the requirements in § 35.57.

The RSO must receive training in the radiation safety, regulatory issues, and emergency procedures of the NeoVista Epi-Rad₉₀TM System. This training requirement may be satisfied by completing training provided by the NeoVista Epi-Rad₉₀TM System vendor or by completing training that is supervised by an individual (AU, AMP or RSO, as appropriate) who is authorized for the NeoVista Epi-Rad₉₀TM System.

The applicant must submit documentation for all of the above T&E for the RSO of the NeoVista Epi-Rad₉₀TM System. NRC Form 313A (RSO), "Radiation Safety Officer Training and Experience and Preceptor Attestation [10 CFR 35.50]," or other formats which capture equivalent information may be used to document T&E.

Note: NRC will not require individuals seeking authorization for the NeoVista Epi-Rad₉₀TM System to obtain a preceptor statement for the responsibility of this device.

Written Directives

For the NeoVista Epi-Rad₉₀TM System, the written directive shall, before treatment, contain the patient or human research subject's name; the radionuclide; treatment site; source activity; and total dose.

Specific Information on Radiation Safety Precautions and Instructions

[10 CFR 35.12(d)(1)(i)]

The applicant shall commit to following all the requirements in 10 CFR 35.400, 35.404, 35.406, 35.432, and, if a treatment planning system is used, 35.457. In addition, the applicant should commit to the following:

- The standard protocol will be conducted in the physical presence of an:
 - AMP authorized for the NeoVista Epi-Rad₉₀TM System; or
 - AU authorized for procedures other than the standard protocol; or
 - RSO authorized for the NeoVista Epi-Rad₉₀TM System (except an RSO who is an AU authorized only for the standard protocol).
- For all procedures other than the standard protocol, the AU will consult with the retinal surgeon and an AMP authorized for the NeoVista Epi-Rad₉₀TM System before initiating treatment. The procedures will be conducted in the physical presence of either the AU authorized for procedures other than the standard protocol, or AMP authorized for the NeoVista Epi-Rad₉₀TM System.
- The activity of each Sr-90 source that is used to determine the treatment times for intraocular ophthalmic treatments will be calculated by either an AMP authorized for the NeoVista Epi-Rad₉₀TM System or another individual whose calculation will be reviewed by the AMP authorized for the NeoVista Epi-Rad₉₀TM System. If an

individual other than an AMP authorized for the NeoVista Epi-Rad₉₀TM System calculates the activity of the Sr-90 source, the AMP will review the calculated activity within 30 days prior to the first post-calculation treatment utilizing the source. The records will include the name of the individual who performed the activity calculation, the signature of the AMP who reviewed the calculation, and the date of the AMP's review. The decay will be based on the activity determined under §35.432. As an alternative to the decay calculations and treatment time determinations being performed or reviewed by an AMP, for the standard protocol, the standard calibration certificate (provided by the manufacturer) will be used to determine the treatment times (calculated by the manufacturer) needed to deliver 24 gray. The standard calibration certificate will indicate the prescribed treatment times for various date periods.

- Service and maintenance will be performed only by the manufacturer or persons specifically licensed by NRC or an Agreement State to perform such services. Service and maintenance will be conducted at intervals specified in the Sealed Source and Device certificate (e.g., every two years or no more than 25 uses after initial receipt).
- Prior to each treatment, the applicator device will be tested with the NeoVista Multi-Channel Tester, calibrated by the manufacturer with the applicator device in accordance with the manufacturer's instructions.
- In accordance with the manufacturer's recommended procedures, pre-treatment and post-treatment visual inspections will be conducted to ensure that the slider mechanism of the delivery device is in the locked position. In addition, pre-treatment and post-treatment surveys of the storage container, delivery device, and procedure room will be conducted to ensure that the source has been fully retracted to its storage position.
- The delivery device will be returned to the storage container when not in use and the storage container will be locked in an authorized secure location.
- In accordance with the manufacturer's instructions, the applicator device will be transported to the treatment room in the device holder and returned to the device holder immediately after treatment to shield the device.
- Written emergency procedures will be developed, implemented, and maintained. As a minimum, these procedures will address source recovery when it cannot be confirmed that the source reached the treatment site, or when the source will not return to the shielded storage position in the delivery device. The procedures will include a description of appropriate emergency response equipment and any appropriate surgical interventions.

Notes to Licensees

Notification for AUs and AMPs

NRC recognizes that AUs and AMPs who satisfy the T&E criteria listed in NRC's licensing guidance for intraocular use of the NeoVista Epi-Rad₉₀TM System and are currently listed on a Commission or Agreement State medical use license or permit for the intraocular use of NeoVista Epi-Rad₉₀TM System should be allowed to work under a different license for the same medical use. A specific license of limited scope medical use applicant initially applying for authorization for the medical use of the NeoVista Epi-Rad₉₀TM System or an existing licensee applying for an amendment for the medical use of the NeoVista Epi-Rad₉₀TM System may request authorization to notify the NRC in

the future that it has permitted an AU or AMP to work at its facility without the need to request an additional license amendment, provided the following conditions are met:

- the AU or AMP satisfies the T&E criteria listed in NRC's licensing guidance for the NeoVista Epi-Rad₉₀TM System; and
- the AU or AMP is currently listed on a Commission or Agreement State license, a permit issued by a Commission master material license, a permit issued by a Commission or Agreement State licensee of a broad scope, or a permit issued by a Commission master material license broad scope permittee; and
- the licensee provides NRC a copy of the license or permit on which the AU or AMP was originally listed for the NeoVista Epi-Rad₉₀TM System; and
- the licensee provides documentation to NRC for each AU and AMP of the above listed conditions no later than 30 days after the date that the licensee allows the AU/AMP to work as an AU/AMP for the NeoVista Epi-Rad₉₀TM System.

If this authorization is approved, these notification conditions will be incorporated as license conditions in the licensee's license.

Change in Physical Conditions of Use

If the physical conditions of use exceed those reported in the Sealed Source and Device (SSD) certificate, the limited specific medical use licensee should request an amendment for the new conditions, and a broad scope licensee should perform its own engineering and radiation safety evaluations.

Investigational Device Exemption (IDE) Restrictions

The NeoVista Epi-Rad₉₀TM System is accepted by the U.S. Food and Drug Administration (FDA) under the provisions of an Investigational Device Exemption (IDE) which allows the investigational device to be used in order to collect safety and effectiveness data required to support a premarket approval application or a 510(k) submission to the FDA. This is a research use and therefore, the licensee must meet the requirements in 10 CFR 35.6, "Provisions for the protection of human research subjects." Nothing in the NRC license relieves the licensee from complying with additional FDA requirements under the IDE.

Revision of the NeoVista Epi-Rad₉₀TM System Radiation Safety Programs to Conform to Changes in this Licensing Guidance.

The above licensing guidance may be revised as additional experience is gained regarding the intraocular use of the NeoVista Epi-Rad₉₀TM System. A licensee already authorized for the use of this product that is committed by license condition to following provisions in this guidance existing at the time of original commitment must apply for and receive an amendment to its license in order to make changes to conform with the revised provisions.

An applicant initially applying for authorization for use of the NeoVista Epi-Rad₉₀TM System, or a licensee applying for an amendment to conform with revisions may request to incorporate into its license a change process similar to 10 CFR 35.26. Such a change process can allow some future changes to radiation safety programs provided that the

change process requires the following conditions to be met for revisions to the radiation safety program:

- the revision is in compliance with the regulations; and
- the revision is based upon NRC's current licensing guidance for the NeoVista Epi-Rad₉₀TM System, pursuant to 10 CFR 35.1000 use, as posted on the NRC web site; and
- the revision has been reviewed and approved by the licensee's radiation safety officer and licensee's management; and
- the affected individuals are instructed on the revised program before the change is implemented; and
- the licensee will retain a record of each change for five years; and
- the record will include a copy of the appropriate Web site guidance, the old procedure, the new procedure, the effective date of the change, and the signature of the licensee management that reviewed and approved the change.

If this authorization is approved, these conditions will be incorporated as license conditions in the licensee's license.