



DEPARTMENT OF HEALTH & HUMAN SERVICES
Food and Drug Administration
New England District

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Food and Drug Administration
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Stoneham, Massachusetts 02180
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WARNING LETTER

NWE-14-99W

March 22, 1999

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Dr. Eric R. Cosman
Radionics, Inc.
22 Terry Avenue
Burlington, MA

Dear Dr. Cosman:

During an inspection of your establishment located at 22 Terry Avenue, Burlington, MA on February 9 through 23, 1999, our investigator determined that your establishment manufactures the Xknife Stereotactic Radiosurgery System. Stereotactic radiosurgery systems are devices as defined by Section 201(h) of the Federal Food, Drug, and Cosmetic Act (the Act).

The above-stated inspection revealed that these devices are adulterated within the meaning of Section 501(h) of the Act, in that the methods used in, or the facilities or controls used for manufacturing, packing, storage, or installation are not in conformance with the Quality System regulation for medical devices, as specified in Title 21, Code of Federal Regulations (CFR), Part 820, as follows:

1. Failure to establish and maintain procedures to ensure that formal documented reviews of the design results are planned and conducted at appropriate stages of the device's design development, that appropriate representatives are included, and that the results of a design review, including identification of the design, the date, and the individual(s)

performing the verification, are documented in the design history file as required by 21 CFR 820.30(e). For example:

- a. Procedures were not established to ensure that formal and systematic design reviews were conducted for the "Xknife 4" treatment planning software change. While design reviews were allegedly conducted, the results of those reviews, including identification of the design, the date, and individuals performing the review were not documented.
 - b. There is no documentation to show that the results of in-house verification testing underwent a design review prior to transfer of the design to production.
2. Failure to establish and maintain procedures for the identification, documentation, validation or where appropriate, verification, review and approval of design changes before their implementation as required by 21 CFR 820.30(i). For example:

The Design Control Changes Procedure, QS3-04-0006 Rev. A (approved 3/6/97) lacks necessary detail in many areas:

- a) It does not contain, nor does it cross reference to any other procedures regarding required verification, validation and reviews of design changes.
 - b) It implies that validation of design changes may be optional, but it does not address any criteria whereby verification of design changes could be determined sufficient in lieu of an otherwise mandatory validation requirement for design changes.
 - c) It does not specify how design changes to be made to existing marketed products / software are to be initiated, approved, documented and controlled.
3. Failure to establish and maintain design input procedures that ensure that design requirements relating to the device are appropriate, address intended use of the device, and the needs of the user and patient; failure to include a mechanism for addressing incomplete, ambiguous, or conflicting design requirements, as required by 21 CFR 820.30(c). For example:

Design input procedures were not established for the "Xknife 4" treatment planning software change and there was no documented mechanism for addressing incomplete, ambiguous, or conflicting design requirements.

4. Failure to establish and maintain procedures for validating the device design; failure to document the results of the design validation, including identification of the design, method(s), the date, and the individual(s) performing the validation in the design history file, as required by 21 CFR 820.30(g). For example:

Procedures were not established for validating the "Xknife 4" treatment planning software change.

5. Failure to establish and maintain procedures for verifying the device design, to confirm that the design output meets the design input requirements, as required by 21 CFR 820.30(f). For example:

The results of testing show that the design/system requirements were not met for the Auto Contour/Contour procedures on page 5 & 8, the Jaws procedure on page 20, and the Autoplan procedure on page 22 of the test plan. There is no documented justification for accepting the design with these discrepancies left unresolved.

6. Failure to establish and maintain procedures to ensure that the device design is correctly translated into production specifications as required by 21 CFR 820.30(h). For example:

There was no established procedure for transferring the "Xknife 4" treatment planning software to production.

This letter is not intended to be an all-inclusive list of deficiencies at your facility. It is your responsibility to ensure adherence to each requirement of the Act and regulations. The specific violations noted in this letter and in the FDA Form 483 issued at the conclusion of the inspection may be symptomatic of serious underlying problems in your establishment's manufacturing and quality assurance systems. You are responsible for investigating and determining the causes of the violations identified by the FDA. If the causes are determined to be systems problems, you must promptly initiate permanent corrective actions.

Federal agencies are advised of the issuance of all Warning Letters about devices so that they may take this information into account when considering the award of contracts. Additionally, no premarket submissions for Class III devices to which the Quality System/GMP deficiencies are reasonably related will be cleared or approved until the violations have been corrected. Also, no requests for Certificates to Foreign Governments will be approved until the violations related to the subject devices have been corrected.

You should take prompt action to correct these deviations. Failure to promptly correct these deviations may result in regulatory action being initiated by the Food and Drug Administration without further notice. These actions include, but are not limited to, seizure, injunction, and/or civil penalties.

Please notify this office in writing within 15 working days of receipt of this letter, of the specific steps you have taken to correct the noted violations, including an explanation of each step being taken to identify and make corrections to any underlying systems problems

necessary to assure that similar violations will not recur. If corrective action cannot be completed within 15 working days, state the reason for the delay and the time within which the corrections will be completed.

Your response should be sent to Karen N. Archdeacon, Compliance Officer, Food and Drug Administration, One Montvale Avenue, Stoneham, MA 02180.

Sincerely yours,


John R. Marzilli
District Director
New England District