



DEPARTMENT OF HEALTH & HUMAN SERVICES

4-35
Public Health Service
Food and Drug Administration

M3197

19900 MacArthur Blvd., Ste 300
Irvine, California 92612-2445
Telephone (949) 798-7600

WARNING LETTER

OCT 29 1999

VIA FACSIMILE
CERTIFIED MAIL – RETURN RECEIPT REQUESTED

William J. Mercer, Chief Executive Officer
Alaris Medical Systems
10221 Wateridge Circle
San Diego, CA 92121

W/L 05-00

Dear Mr. Mercer:

During an inspection of your firm located in San Diego, CA from May 4th through July 6th, 1999, our investigator determined that your firm manufactures, among other things, infusion pumps. The MedSytem III (formerly known as the MiniMed 3) Infusion Pump is a device as defined by Section 201(h) of the Federal Food, Drug and Cosmetic Act (the Act).

The above stated inspection revealed that this device is 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, packaging, storage, or installation are not in conformance with the Quality System Regulation as specified in Title 21, CFR Parts 820 as follows:

QUALITY ASSURANCE

1. Failure to analyze processes, work operations, concessions, quality audit reports, quality records, service records, complaints existing and potential causes of nonconforming product, or other quality problems to detect recurring quality problems [820.100(a)(1)]. For example, you do not document when analyses of returned devices are completed.
2. Failure to extend corrective and preventative actions to devices previously sold [820.100(a)(3)]. For example, you implemented corrective actions to your

MedSystem III (Mini Med3) Infusion Pump without plans for prompt inclusion of devices currently in distribution.

3. Failure to verify/validate that corrective and preventative actions are effective and do not adversely affect product [820.100(a)(4)]. For example, the type and size of capacitors in the MedSystem III's powerboard were changed through several revisions. You did not conduct validation studies at the labeled low and high flow rates for the pump after the changes.
4. Failure to evaluate non-conformances [820.100(b)]. For example, a deviation from the validated Ethylene Oxide Sterilization cycle was not documented as a deviation nor was there any indication an evaluation of the deviation had been performed.

DESIGN CONTROLS

5. Failure to write adequate procedures that ensure that design verification and/or validation are complete before transferring the design to production [820.30(e) and (g)]. For example, SOP 275 – Product Development and Design Control Process (Rev H) does not require verification/validation failures be resolved before the unit is transferred to manufacturing.
6. Failure to ensure that design output meets the design input requirements [820.30(f)]. For example, a rate accuracy failure was not within the required +/- [redacted] at the [redacted] mL/hr flow rate. This failure was not resolved before the device was released to production.
7. Failure to follow procedures designed to ensure that the device design is correctly transferred to production specifications [820.30(h)]. For example, the Drug Listing Editor for the MedSystem III Infusion Pump was released to manufacturing before the design verification/validation was completed.

PROCESS VALIDATION

8. Failure to perform validation of a process that can not be fully verified according to established procedures [820.75(a)]. For example, your firm did not use the indicated number of biological indicators in the revalidation of your Ethylene Oxide sterilization process.
9. Failure to revalidate procedures when process changes occur [820.75(c)]. For example, changes to the Ethylene Oxide Sterilization Process employed by your firm were made without prompt revalidation of the procedure. Changes were

made on August 27th and September 8th, 1997; the process was revalidated on September 22nd, 1998.

PRODUCTION AND PROCESS CONTROLS

10. Failure to follow procedures designed to adequately control environmental conditions that could adversely affect product quality [820.70(c)]. For example, an improperly grounded workstation used to service/repair electrostatic devices was observed. SOP – 084 requires all workstations to be appropriately grounded.
11. Failure to ensure equipment is appropriately designed, constructed, placed and installed [820.70(g)]. For example, there is no IQ/OQ studies for the EPROM adapter test fixtures used for MedSystem III EPROM testing.
12. Failure to validate production/process changes [820.70(i)]. For example, your Data I/O EPROM Programmers had their firmware upgraded without validation to ensure the change had no adverse affect.

MANAGEMENT CONTROLS

13. Failure to establish the appropriate responsibility, authority, and interrelation of all personnel who manage, perform and assess work affecting quality, and provide the independence and authority necessary to perform those tasks [820.20(b)(1)]. For example, management did not ensure the proper grounding of the workstation used to service/repair electrostatic devices as required by SOP - 084.

COMPLAINT FILES

14. Failure to record the possible failure of a device to meet its specifications [820.198(c)]. For example, your July 16, 1999 letter discusses faults/watchdog alarms. There is no information on how you track the occurrence of the alarms nor how you analyze for trends and/or manufacturing problems.
15. Failure to adequately record the results of investigations [820.198(e)]. For example, Complaint 09-98-212 does not adequately document your investigation in that it does not provide patient or event details.

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 the regulations. The specific violations noted in this letter and in the FDA 483 issued at the

close out of the inspection may be symptomatic of serious underlying problems in your firm'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.

In order to facilitate FDA in making the determination that such corrective actions have been made and thereby enabling FDA to withdraw its advisory to other federal agencies concerning the award of government contracts, and to resume marketing clearance, and export clearance for products manufactured at 10221 Wateridge Circle, San Diego, CA facility, we are requesting that you submit to this office on the schedule below, certification by an outside expert consultant that it has conducted an audit of your firm's manufacturing and quality assurance systems relative to the requirements of the device QSR regulation (21 CFR, Part 820). As CEO, you should also submit a copy of the consultant's report, and your certification that you have reviewed the consultant's report and that your firm has initiated or completed all corrections called for in the report. The attached guidance may be helpful in selecting an appropriate consultant.

The initial certifications of audit and corrections and subsequent certifications of updated audits and corrections (if required) should be submitted to this office, Attention: Thomas L. Sawyer, by the following dates:

Initial certifications by consultant and firm -	April 29, 2000
Subsequent certifications -	July 29, 2000
	October 29, 2000
	January 29, 2001
	April 29, 1999
	July 29, 2001
	October 29, 2002

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 devices to which the QSR deficiencies are reasonably related will be cleared until the violations have been corrected. Also, no requests for Certificates for Products for Export will be approved until the violations related to the subject device have been corrected.

We acknowledge your response to the FDA-483. However, the District believes your corrective actions are not sufficient to prevent the recurrence of the systems deficiencies identified above. You should take prompt action to correct these deviations. Failure to promptly correct these deviations may result in further 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.

Letter to Mr. Mercer
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Please notify this office in writing within fifteen (15) working days of receipt of this letter, of the specific steps you will be taking to comply with our request. Your written response should be directed to the Food and Drug Administration, Attention:

Thomas L. Sawyer
Director, Compliance Branch
Food and Drug Administration
19900 MacArthur Blvd., Suite 300
Irvine, CA 92612

Sincerely,


Acting District Director

Enclosure: Selecting a Consultant Document