



70-734

GA Technologies

In Reply
Refer To: 696-7056

GA Technologies Inc.
P.O. BOX 85608
SAN DIEGO, CALIFORNIA 92138
(619) 455-3000

20 May 1985



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Dr. William T. Crow
U.S. Nuclear Regulatory Commission
Office of Nuclear Material Safety & Safeguards
Washington, D.C. 20555

Subject: Docket 70-734: SNM-696; Supplement to Request for Amendment of
Certain License Specifications and Related License Conditions.
(6 copies)

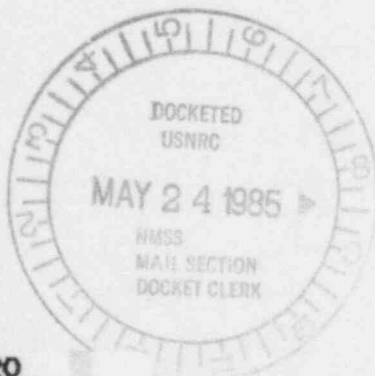
Dear Dr. Crow:

GA Technologies Inc. (GA) has recently submitted a request for amendment of certain license specifications and related license conditions. This request was submitted April 23, 1985. Subsequently in discussions with your staff, it was agreed that additional changes to the section dealing with testing, calibration and maintenance of criticality alarms was in order. Attached herewith are four pages containing additional clarifications of the testing and calibration requirements as well as some expanded statements regarding the conditions under which licensee would be exempt from certain requirements of 10 CFR 70.24.

Please substitute these pages for the Pages II 4-16 and II 4-17 of the recently renewed Specifications Volume. Page II 4-16 of this submittal supersedes II 4-16 of our April 23, 1985 correspondence. An instruction sheet is enclosed.

We believe that the expanded text of this submission answers all the questions raised by your staff in the matter of criticality alarm testing and calibration.

We look forward to your early approval of this and our April 23 request since we have scheduled a shutdown of the criticality alarm system within the SVA facility so we may begin modifications of the system on May 30.



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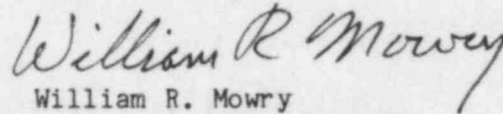
William T. Crow

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696-7056

Thank you for your staff's cooperation in expediting our request. Should there be any additional questions in the matter, please don't hesitate to contact me at (619) 455-2823.

Very truly yours,



William R. Mowry
Licensing Administrator

WRM:hc

Enclosures:

1. Specifications Volume:
Pages II 4-16, II 4-17, II 4-17a, II 4-17b
2. Instruction sheet

cc: NRC, Region V (1 copy)

Instructions for updating
SNM-696 Specifications Volume
20 May 1985

Remove	Add
Page II 4-16, Rev. 2, dated 11/83	Page II 4-16, Rev. 5, dated 4/23/85
Page II 4-17, Rev. 3, dated 4/84	Page II 4-17, Rev. 5, dated 4/23/85
	Page II 4-17a, Rev. 5, dated 4/23/85
	Page II 4-17b, Rev. 5, dated 4/23/85

4.2.1.3 Radioactive Material Detection and Assay

Portable instrumentation shall be available and utilized for detection and assay. This instrumentation includes:

X ray and gamma - Geiger-Muller (GM) detectors, scintillation detectors, scintillation detectors coupled with a portable scaler for assay of low levels of activity, scintillation detector coupled with a single-channel analyzer, and ion chambers.

Beta - GM detectors and ion chambers.

Alpha - Air proportional and scintillation detectors.

Neutron - mRem or Rem reading neutron monitor.

Fixed instrumentation shall be available and utilized as required for radiological safety purposes. Such instruments shall include counting equipment, spectrometers for analysis of samples, calibration sources(s) to calibrate instruments, and meteorological equipment for measurement of certain meteorological conditions.

4.2.1.4 Criticality Monitoring and Alarm System

The licensee shall maintain in each area where SNM is handled, used, or stored a monitoring system using gamma or neutron-sensitive radiation detectors which will energize clearly audible alarm signals if accidental criticality occurs. This system shall meet the performance requirements of 10 CFR 70.24(a). Each system shall be tested monthly using internal check sources or portable sources. Individual channels of the system will be recalibrated when whichever occurs first:

1. detector and amplifier response to a check source is $> \pm 50\%$ from expected value.

2. detector and amplifier response to internal "keep alive" source or known external radiation field is not within +100% of expected value.
3. prior to reentry into service following any required maintenance.

The alarm trip levels may be set at levels between 5 mR/hr and 20 mR/hr for non-coincidence systems and a correspondingly appropriate predetermined level if the system is a coincidence type. They will be readjusted if the alarm point fails to activate within 25 sec on at least three of four trials.

Any area which meets the criteria of 1, 2 or 3 below and which has prior CRSC approval is exempt from the monitoring system described above.

1. General Spaces

- a. The area shall be a defined nuclearly isolated space, area, laboratory, building or facility established to control SNM activities.
- b. The area shall have established an MBA which shall be limited to not more than 700 grams contained U-235, 500 grams U-233, 400 grams plutonium or 400 grams of a combination thereof.
- c. The area's activity shall be under an approved work authorization.
- d. Administrative and procedural and/or physical constraints exist to preclude the introduction of more than the authorized amount of SNM to the controlled area.

2. Hot Cells

- a. Heavily shielded cells designed to contain highly irradiated fuel, reactor components, or byproduct material sources.
- b. The operating and service galleries of the cells shall be alarmed.

3. Other

- a. Any area used for temporary storage of SNM in authorized shipping containers on transport vehicle pending its shipment or delivery to on-site storage area.

In addition, the licensee is exempt from the 10 CFR 70.24 monitoring system requirements when performing system repair or modifications provided that:

- 1. special attention is given to minimizing the period of inoperability.
- 2. no material handling will be allowed in the area while the alarms are inoperative unless such handling is to mitigate a significant Health Safety problem or provide required physical protection and receives prior approval of operating management, the managers of Nuclear Safety & Health Physics, and the Chairman of the CRSC.
- 3. and facility operating staff will be informed of the special operating circumstances limiting SNM handling.

The licensee also is exempt from the 10 CFR 70.24 alarm audible requirement when planned operations will result in radiation levels above the 5-20 mR/hr monitoring system trip levels provided that:

1. the radiation level is continuously measured and is under observation during the interval of bypass of the alarm's audio;
2. any unrelated SNM handling in the area shall be suspended during the period of bypassed alarm audio;
3. the bypassing of the audio alarm is accomplished by or under direction of Health Physics and
4. The system will be tested for complete operability at the time it is returned to normal service.

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FCUF ☒ PDR ☒
FCAF ☐ LPDR ☐
WM ☐ I&E REF. ☒
WMUR ☐ SAFEGUARDS ☒
FCTC ☐ OTHER ☐

DESCRIPTION:

supplement to
request for
Amendment

05/24/85 INITIAL Cec