



70-734

July 12, 1994  
696-2263

Mr. Robert C. Pierson, Chief  
Licensing Branch  
Division of Fuel Cycle Safety and Safeguards, NMSS  
U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852

SUBJECT: Docket No. 70-734; License No. SNM-696; Submittal of Updated Pages  
to License Specifications

Dear Mr. Pierson:

Until his retirement, all functions responsible for assuring General Atomics' (GA's) compliance with license requirements and applicable regulations reported to Mr. Rademacher, GA's Vice President of Human Resources. Now, all of those same functions report to Mr. James R. Edwards, Vice President, General Counsel and Secretary. Just as Mr. Rademacher did, Mr. Edwards reports to Mr. Ed Jones, Senior Vice President. Various members of NRC staff at Headquarters and Region V (now IV) were advised of this change in personnel shortly after it occurred. The purpose of this letter is to submit an updated Section 3 of GA's License Specifications which reflects this change.

The revisions consist of removing all references to the Director (later Vice President) of Human Resources and replacing them with Vice President, Legal (where it is first explained that Vice President, General Counsel and Secretary will be referred to simply as Vice President, Legal). Additionally, references to the "Manager" of Licensing, Safety and Nuclear Compliance (LSNC) have been replaced with "Director." While not every page required revising, for convenience in updating your records, a new Section 3 in its entirety is being provided dated July 1994.

GA has already submitted revised versions of the following of its plans which included revisions reflecting the above described changes: 1) Fundamental Nuclear Material Control Plan and 2) Radiological Contingency Plan.

9407210140 940712  
PDR ADDCK 07000734  
C PDR

NF12  
11

If you have any questions regarding these revisions, please don't hesitate to contact Mr. Brian Laney at (619) 455-4369 or me at (619) 455-2823.

Very truly yours,

A handwritten signature in cursive script, reading "Keith E. Asmussen".

Keith E. Asmussen, Director  
Licensing, Safety, & Nuclear Compliance

Attachment: Section 3 of SNM-696 License Specifications, pages II 3-1 through II 3-16, dated July 1994.

cc:

Mr. Leonard J. Callen, Regional Administrator, U.S. NRC Region IV

Mr. Kenneth E. Perkins, Jr., Office Manager, U.S. NRC Region IV,  
Walnut Creek Field Office

Mr. Jerome Roth, Acting Chief, Operations Branch, NMSS, U.S. NRC Headquarters

### 3. ORGANIZATION AND ADMINISTRATIVE PROCEDURES

#### 3.1 GENERAL

This section describes the organizations, positions, and administrative procedures utilized to control the use of radioactive material (see Fig. II 3.1-1).

The licensee may change organizational responsibilities, reporting locations and names providing such changes do not adversely affect the implementation of license conditions and are reported to the NRC within 60 days after the change has been made.

#### 3.2 RESPONSIBLE ORGANIZATIONS

##### 3.2.1 Operating Groups

All operating groups are required by company policy to conduct their respective activities within federal, state, and local rules and regulations, license criteria, and company policy, criteria and established practices. Such policy requires operating groups to conduct their operations so that radiation exposures to employees and the general public are as low as reasonably achievable.

The responsibility for safe operation and control of activities in a specific SNM or restricted area and for the safety of the environs as influenced by the activities conducted therein shall be vested in the manager of each facility or his or her designee. The manager or designee shall ensure that the conduct of activities within the area is in compliance with all applicable criteria, rules and practices as set forth in Work Authorizations issued under this license implementing the Commission's regulations. By continuous supervision, the manager can take any corrective action necessary to assure license compliance.

### 3.2.2 Compliance Functions

All functions responsible for assuring compliance with applicable license requirements and controlling the radiological and nuclear safety and safeguards of licensed material report to General Atomics' Vice President, General Counsel and Secretary, hereafter referred to as Vice President, Legal. Namely these functions are: Nuclear Safety, Licensing, Safety and Nuclear Compliance, Nuclear Material Accountability, Statistics and Measurement Control, Security and Health Physics.

The Vice President, Legal, or his designee, will establish the necessary policies of operation, cause them to be published in company-wide guides and manuals, and coordinate related activities with operating groups to assure compliance with related policies, procedures, regulations and license conditions. The Vice President, Legal reports to a Senior Vice President (see Fig. II 3.1-1).

The compliance functions are described below and are headed by managers or supervisors which are synonymous titles for signifying the responsible person.

#### 3.2.2.1 Licensing, Safety and Nuclear Compliance (LSNC)

This function administers licenses and reviews and approves all Work Authorizations (WA) involving SNM for compliance to applicable regulation and license conditions. This function provides interpretation of licenses and regulations, determines the need for licensing actions, coordinates the preparation and processing of applications, disseminates license requirements to operating organizations, and maintains or oversees maintenance of master license records to permit independent review by NRC or GA audit functions. In addition, this function supervises and is responsible for the overall planning, coordination, and administration of the special nuclear material measurement control and accounting, nuclear safety, health physics, and industrial safety functions.

#### 3.2.2.2. Health Physics

This function assures compliance with Title 10 Code of Federal Regulations, Parts 19 and 20 and license-imposed radiological safety requirements. This function provides a review and approval function for radiological safety of proposed activities involving SNM, an ongoing monitoring of SNM activities, and provides services such as personnel monitoring, dose rate measurement, radioactive material detection and assay, air and water sampling and environmental monitoring. Health Physics maintains a manual entitled "Radiological Safety Guide," implementing the procedural requirements for radiological safety and approves the content of training programs in radiological safety.

The major responsibilities of the Health Physics Technicians are to conduct routine, special and emergency radiological surveys on all operations, equipment, facilities and personnel in any controlled area and to provide advisory and monitoring services in radiological and nuclear safety.

#### 3.2.2.3 Nuclear safety

This function assures nuclear criticality safety. This function provides review and approval, for nuclear safety purposes, of proposed SNM activities, reviews proposed changes in processes, equipment, and procedures, and performs frequent inspection and monitoring to assure adequate implementation of nuclear safety controls. This function approves for adequacy all determinations of criticality limits and provides and/or obtains independent verification thereof as well as approves the content of training programs in nuclear criticality safety.

#### 3.2.2.4. Nuclear Materials Accountability (NMA)

This function assures compliance with SNM custody and control regulations and practices. This function implements the program for accountability, custody and control of

special nuclear material. NMA maintains a manual of SNM accounting control procedures. NMA assures compliance with safeguards material control and accountability regulations and license conditions.

#### 3.2.2.5. Statistics and Measurement Control (SMC)

This function is responsible for implementing the measurement control program as it relates to SNM control and accountability. This function assures SNM measurement quality by monitoring and evaluating applicable information, practices and procedures. This function is also responsible for maintaining a SNM Measurements and Statistical Control Manual setting forth the procedures for implementation of measurements, measurement control and statistical control requirements, and implements the program for furnishing measurement and statistical information for inventories, receipts, and shipments.

#### 3.2.2.6 Security

This function provides security measures to prevent unauthorized access to special nuclear material and to provide appropriate industrial security. The security function is responsible for assuring compliance with Security regulations and license conditions. This includes maintaining a force of guards who carry out the required orders established by the Manager of Security or his designee. The security functions include the following: (1) maintenance of a Security Office, (2) responsibility for the physical protection of controlled areas, protected areas, vital areas, and material access areas, as required, (3) provision for monitoring the fire and intrusion alarms and related communication systems, (4) implementation of security inspection procedures, and (5) assuring adequate physical protection of classified information.

#### 3.2.3. Criticality and Radiation Safety Committee (CRSC)



The CRSC reports to the office of the President via a designated vice-president. Committee members who have diverse expertise and qualifications are appointed by the company's Executive Committee. A written policy statement establishes committee and member responsibilities. As a minimum, the committee: (1) acts in a radiological safety advisory capacity; (2) reviews policies and criteria established for safety of SNM operations; (3) provides second level of review for nuclear safety analysis; and (4) audits work involving radioactive materials for conformance to and effectiveness of applicable procedures and practices including a review to determine how exposures might be reduced to meet ALARA. All results of CRSC meetings will be documented.

### 3.3. POSITION QUALIFICATIONS<sup>1</sup> AND TRAINING

#### 3.3.1 Facility Managers

A Facility Manager shall have demonstrated his/her proficiency in activities relevant to the functions assigned, as defined in paragraph 3.2.1. Demonstration of this proficiency shall be based on the manager's qualifications which shall include an accredited four-year college degree, a minimum of two years applicable work experience and/or training in nuclear activities, and knowledge of the licensee's radiation protection program.

#### 3.3.2. Compliance Functions

The Vice President, Legal is responsible for assuring compliance with applicable licensing requirements and controlling the radiological and nuclear safety and safeguards of

---

<sup>1</sup>A two-year degree plus five years of directly applicable experience or a high school diploma (or equivalent) plus 10 years of directly applicable experience may be considered equivalent to an accredited four-year college degree and appropriate work experience, subject to a determination by the Vice President, Legal that proficiency has been demonstrated. A master's or doctor's degree in science or engineering from an accredited college is considered equivalent to two years of applicable experience.

licensed material, as generally defined in paragraph 3.2.2. Incumbents must have a minimum of five years of nuclear industry management experience of a high level general management nature.

The Director, Licensing, Safety and Nuclear Compliance shall have demonstrated his/her proficiency in activities relevant to the functions assigned, as defined in paragraph 3.2.2.1. Demonstration of this proficiency shall be based on the manager's qualifications which shall include an accredited four-year college degree in science, engineering or other related field, a minimum of two years applicable work experience and/or training in nuclear industry management, and a knowledge of nuclear safety and health physics.

The Manager of Health Physics shall have demonstrated his/her proficiency in nuclear health physics activities, and the evaluation of potential radiological hazards, such as defined in paragraph 3.2.2.2. Demonstration of this proficiency shall be based on the manager's qualifications which shall include an accredited four-year college degree in the physical sciences, biological sciences, or other related field and a minimum of two years experience in phases of nuclear health physics relating to GA licensed activities and the evaluation of potential radiological hazards therefrom, or equivalent work experience or training.

The Manager, Nuclear Safety shall have demonstrated his/her proficiency in activities of nuclear safety and outside reactor criticality safety, such as defined in paragraph 3.2.2.3. Demonstration of this proficiency shall be based on the manager's qualifications which shall include an accredited four-year college degree in science, engineering or other related field and a minimum of two years experience and/or training in nuclear safety activities related to nuclear fuel fabrication operations, or one year of such experience and/or training plus two years of other nuclear safety experience and/or training.

The Manager, Nuclear Materials Accountability shall have demonstrated his/her proficiency in activities relevant to the functions assigned, as defined in paragraph 3.2.2.4. Demonstration of this proficiency shall be based on the manager's qualifications which shall



include an accredited four-year college degree in a relevant field and a minimum of two years applicable work experience and/or training in nuclear material accountability and control activities.

The Manager, Statistics and Measurement Control shall have demonstrated his/her proficiency in activities relevant to the functions assigned, as defined in paragraph 3.2.2.5. Demonstration of this proficiency shall be based on the manager's qualifications which shall include an accredited four-year college degree in science, engineering or other related field and a minimum of two years applicable work experience and/or training in quality assurance/control, statistics, nuclear measurements, or related activities.

The manager, Security, shall have demonstrated his/her proficiency in activities relevant to the functions assigned, as defined in paragraph 3.2.2.6. Demonstration of this proficiency shall be based on the manager's qualifications which shall include an accredited four-year degree and a minimum of two years applicable work experience and/or training in managing or implementing security programs in the nuclear industry.

A Health Physics Technician shall have demonstrated his/her proficiency in activities relevant to the functions assigned as described in Section 3.2.2.2. Demonstration of this proficiency shall be based on the technician's qualifications which shall include a high school diploma or equivalent, and a minimum of two years applicable work experience and/or training related to nuclear activities, including at least three (3) weeks of specific on the job training.

### 3.3.3. CRSC

Members of the Criticality and Radiation Safety Committee (CRSC) shall have expertise in their special fields. Such expertise shall, as a minimum for technical members, require an accredited college degree or equivalent training in a field appropriate to their specialties and a minimum of two years related experience. For nontechnical members, a minimum of three years experience in an appropriate field is required.

The fields of specialty shall include as a minimum, disciplines from nuclear physics, reactor physics, health physics, chemistry and statistics. A member may represent more than one field of specialty.

#### 3.3.4 Independent Nuclear Safety Reviewers

Employees performing independent nuclear safety analysis and review shall have similar qualifications to those specified in Section 3.3.2 for the Manager, Nuclear Safety. Each of the parties may have their relevant experience in a different specific phase, but this will allow broader expertise to be utilized. In each case individuals shall have their qualifications reviewed and approved by the Manager of the reviewing organization, Nuclear Safety or the Chairman, CRSC.

#### 3.3.5 Training

Authorized Users - Employees who handle SNM other than under the direct supervision of another trained individual, must have satisfactorily completed the Radiological Safety Course which includes the following topics: ALARA practices, an introduction to 10 CFR 19 and 10CFR 20, radiological instrumentation and controls, decontamination procedures, fire protection, and emergency procedures. General subjects such as the nature and sources of radiation, units, methods of controlling contamination, interactions of radiation and matter, biological effects of radiation, use of monitoring equipment, principles of nuclear criticality safety and risks from occupational radiation exposure are also covered. The course is presented by lectures and demonstrations including the use of selected audiovisual aids.

The understanding of the employees and the effectiveness of the training course are evaluated with an examination given at the end of the course. Employees are required to pass the written examination with a grade of 70 percent before being allowed to handle radioactive material without direct supervision. The exam includes radiological practices and

nuclear safety principles. The Manager, Health Physics, or other qualified designee is responsible for the radiological safety training course content.

Retraining - Retraining on selected subjects will be done annually. Subjects will include both radiological and nuclear safety controls. The understanding of the employees and the program's effectiveness will be evaluated with an examination which must be satisfactorily completed with a score of 70 percent. Records of the training will be kept which will include the date held, subject matter covered, attendees, instruction and test results. The Manager, Health Physics or other qualified designee is responsible for this training.

Health Physics Technician Training - All Health Physics Technicians shall successfully complete the Radiological Safety Course described above and receive on-the-job training. Additional Nuclear Safety Training shall be given to enable them to do nuclear safety monitoring on a "continuous basis" in areas where more than 500 grams of U-235 is handled. Training will include topics such as characteristics of criticality, principles of nuclear safety, specific SNM station limits and justifying criteria and details of postulated criticality accidents.

Records of training include the date held, subject matter covered, attendees, instructor and test results. Such records will be kept for two years or longer if so required by Part 19 or 20.

### 3.4. WORK AUTHORIZATIONS

Any operating group desiring to initiate new work or to make changes in previously approved work involving special nuclear material subject to this license may do so only upon receipt of proper authorization. Procedural requirements and instructions for obtaining Work Authorizations (WA) are to be maintained in current form in the Radiological Safety Guide. The basic procedure for obtaining approval of a Work Authorization is described in section 3.4.1 and is shown schematically in Figure II 3.4.1. Changes to this procedure require review and approval by the Director of Licensing, Safety and Nuclear Compliance, the Vice President,

The criteria for WA approval are contained in Section 3.4.2.

1. The operating group desiring to do the work shall prepare a Work Authorization (WA) request identifying the proposed work and quantity and form of SNM to be used as well as drafts of the necessary safety related procedures, equipment features, and process characteristics. The WA shall be approved in writing by the applicable manager who must assert that all license and company criteria and procedures for radiological safety, criticality, material accountability and control, and physical protection requirements will be met. Also, he must assert that other applicable safety related features of the work, such as structural integrity, potential of fire or explosion and the like, are adequately considered and suitable provisions have been incorporated. The approved WA and backup information shall then be forwarded to Health Physics.
2. The WA and appropriate safety related information shall be approved in writing by Health Physics, Nuclear Safety, Nuclear Material Accountability, and Licensing, Safety and Nuclear Compliance. In addition, the request shall be sent to (1) Security for approval if physical protection requirements for the area are to be modified, and 2) CRSC for approval if the WA is for new or changed work involving new or revised nuclear safety analysis and involves a quantity of SNM greater than 350 gm of U-235, 200 gm of U-233, 200 gm of encapsulated plutonium, or any quantity of unencapsulated plutonium of any isotope. If a license modification is required, Licensing, Safety and Nuclear Compliance shall make the determination and take appropriate action with governmental

regulatory authorities. Any reviewer shall seek outside expertise as deemed necessary.

3. After the WA has been approved in writing, authorization shall be deemed granted. Authorization shall include any special conditions required by the license and such other conditions as the reviewers deem necessary.
4. The originating department shall revise, where appropriate, the operating procedures and practices before implementing requested work. The current version of Work Authorization and the approved procedures will be available in or near the applicable work area.
5. All SNM Work Authorizations will be re-reviewed and approvals updated at least every three years.
6. Work Authorization records including supporting criticality analysis shall be retained for at least six months following the expiration date of the authorization.

#### 3.4.2. CRITERIA FOR WA APPROVAL

Evaluation of each request for WA approval shall include but not be limited to the following determinations by the manager, or designee, of the respective responsible compliance functions:

1. That the proposed work is within currently authorized license limits.
2. That radiological safety is properly assured. This includes a review of operational methods to attain "as low as reasonably achievable" radiation exposures.



3. That criticality safety has been reviewed and adequate provisions are incorporated.
4. That new or revised nuclear safety analysis has been separately verified by two independent parties. Analysis of solid angles of interaction require verification by a single independent party.
5. That proper SNM accountability control is provided.
6. That proper material protection for SNM is provided and that applicable limits and regulations are observed.
7. That an assessment of the effluents has been performed and proper provisions for control exist.
8. That industrial safety practices and procedures are considered as they relate to radiological and nuclear safety.

### 3.5 RADIOLOGICAL WORK PERMIT

The Radiological Work Permit (RWP) is intended primarily for authorization of temporarily assigned GA employees who are not on a Work Authorization, or outside contractors or subcontractor personnel who will perform limited or routine work in a Controlled Area, but whose exposure to possible radiation or contamination is incidental to their function.



### 3.6 INTERNAL INSPECTION AND AUDIT

#### 3.6.1 Inspections and Reviews

Inspections and reviews of activities involving materials subject to this license are performed by Health Physics, Nuclear Safety, Nuclear Material Accountability, and Security. A Health Physics quarterly inspection\* of the SNM activities subject to this license shall be made by the Manager, Health Physics or qualified designee. The Manager, Nuclear Safety, or his designee performs criticality inspections\* of all areas possessing SNM as follows: at least once annually for all areas and at least quarterly for areas possessing more than 500 g of fissile SNM. The NMA inspections and reviews are conducted in accordance with requirements of the license Safeguards Amendment SG-1 and the approved FNMC Plan. Security conducts tests and inspections as required by the license Safeguards Amendment SG-1 and approved security plans. Findings as a result of inspections shall be reported in writing to the facility manager, the Directors of the operating division, the Vice President, Legal, and the Chairman of CRSC. The Vice President, Legal or his designee shall follow up and assure that necessary corrective actions are taken.

#### 3.6.2 Audits

Audits\* are performed by the CRSC at least once each calendar year with no interval over 15 months for areas containing more than 500 gm of SNM to verify that work is being done in compliance with approved plans and procedures. Such audits are reported in writing to the responsible management, the audited organization, and the Vice President, Legal. Copies of the audit reports will be forwarded to the affected Vice Presidents. The Vice President, Legal or his designee shall follow up problem areas and implement needed corrective action.

---

\* These shall be conducted according to a written plan which will include, but not be limited to, the scope of identified discrepancies, unusual events, corrective actions, review of operations involving any substantially new activity.

### 3.7. OPERATING POLICIES AND PROCEDURES

#### 3.7.1 General

Policies and criteria applicable to work with materials subject to this license shall be approved by the Vice President, Legal or his designee, and as applicable, receive prior review by CRSC. Design criteria applicable to work with materials subject to this license shall be approved by the Director, Licensing, Safety and Nuclear Compliance, and the Manager, Nuclear Safety, or their designees, and as applicable receive prior review by CRSC. Any operating department may have additional and more stringent criteria or procedures providing such procedures are within approved policies and criteria.

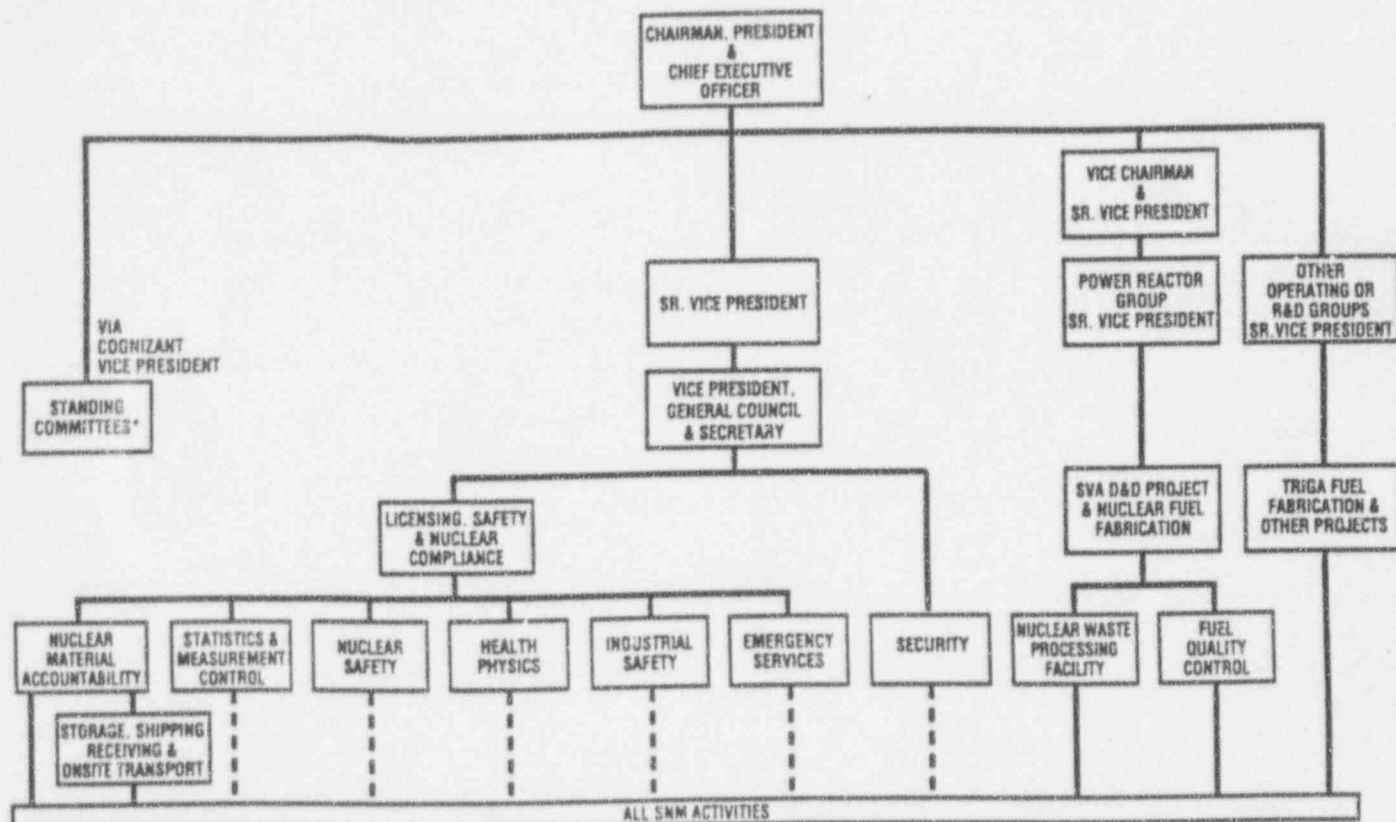
#### 3.7.2 Activities Requiring Procedures

Procedures are required for all activities in which materials subject to this license are physically handled, stored and chemically or physically changed.

#### 3.7.3 Unusual Events

Any unusual event which significantly threatens or lessens the effectiveness of radiological or health safety provisions of the license will be investigated and reported to the Vice President, Legal and the applicable vice presidents. The Vice President, Legal is responsible for conducting an investigation and documenting the corrective action or reports resulting therefrom. NRC shall be notified in accordance with requirements of 10 CFR 19, 20, 21, 70 or 73.





\*INCLUDES:  
 CRITICALITY AND RADIATION SAFETY  
 SAFEGUARDS MANAGEMENT REVIEW COMMITTEE  
 REVIEW COMMITTEE SECURITY  
 MANAGEMENT AUDIT COMMITTEE TRIGA  
 CRITICALITY SAFETY COMMITTEE

L-110(1)

July 1994

Fig. II 3.1-1 Radioactive Materials Management Organization Chart