

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	
1. General Atomics 2. P.O. Box 85608 San Diego, California 92186-9784	3. License Number SNM-696, Amendment 53 4. Expiration Date December 31, 1989 5. Docket No. 70-734 Reference No.

6. Byproduct Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum amount that Licensee May Possess at Any One Time Under This License
A. Uranium	A. Enriched up to 19.99% U-235	A. 200 kilograms U-235
B. Uranium	B. Enriched 20 to 100% U-235	B. Less than 5000 gm*
C. U-233	C. Any	C. Less than 2000 gm U-233*
D. Plutonium	D. Encapsulated and/or sealed sources	D. Less than 2000 gm total Pu*
E. Plutonium	E. Bred but unseparated	E. Less than 1000 gm total Pu*
F. Plutonium	F. Plated calibration source	F. Less than 5 grams total Pu*
G. Plutonium	G. Solutions, precipitates solids	G. Less than 5 grams and total Pu*

* The sum total quantity of strategic special nuclear material possessed at any one time must be less than 5,000 grams computed by the formula:
 Grams = grams U-235 in uranium enriched to 20% or more plus 2.5 (grams U-233 + grams plutonium)

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SUPPLEMENTARY SHEET**

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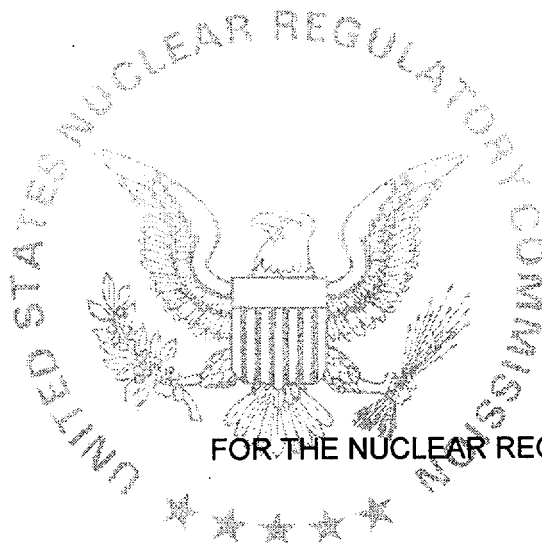
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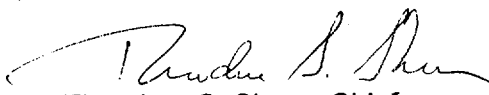
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Amendment No. 53

9. Authorized place of use: The licensee's San Diego, California site as specified in the aforesaid application and supplements.
10. This license shall be deemed to contain two sections: Safety Conditions and Safeguards Conditions. These sections are part of the license, and the licensee is subject to compliance with all listed conditions in each section.



FOR THE NUCLEAR REGULATORY COMMISSION

Date: April 21, 1999
By: Theodore S. Sherr, ChiefDivision of Fuel Cycle Safety
and Safeguards, NMSS
Washington, DC 20555

(Provided w/Amendment 31)

- Enclosures: 1. License Condition for Leak Testing
Sealed Plutonium Sources, dtd 4/93
2. License Condition for Plutonium Alpha
Sources, dtd 4/93
3. Guidelines for Decontamination of
Facilities..., dtd 4/93

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SAFETY CONDITIONS

- S-1. Authorized use: For use in accordance with statements, representations, and conditions contained in Part II - "License Specifications" dated July 24, 1981, and supplements dated March 16 and December 24, 1982; February 4, November 14, and November 15, 1983; April 10, April 12, June 28, September 4, and September 7, 1984; December 5, 1985; May 23, September 25, and December 10, 1986; December 21, 1987; March 4, March 9 (2), March 22, April 26, August 22, September 8, and November 2, 1988; May 25 and November 17, 1989; June 27, 1990; April 30 and September 27, 1991; March 5, March 18, June 24, and September 10, 1992; January 20, 1995; the "SVA Decommissioning Plan" dated April 1, 1990 (submitted by letter dated March 30, 1990); August 22, 1990 (submitted by letter dated August 24, 1990); June 15, 1992; July 12 and August 23, 1994; Group 6 Laboratories unrestricted use request dated August 12, 1994; March 1, 1995; Group 7 Laboratories unrestricted use request dated December 5, 1995; Group 8B Laboratories unrestricted use request dated August 23, 1996; October 15, 1996; April 30, 1997; Group 9 Laboratories unrestricted use request dated July 17, 1997; Building 30 Laboratories unrestricted use release dated July 25, 1997; and January 29, 1998; Site Decommissioning Plan dated October 11 and December 5, 1996; April 18, 1997; January 15, 1998; Hot Cell Decommissioning Plan dated April 22, 1998, Group 10 Labs dated August 14, Building 27 Roof release dated August 25, and Building 30 - Phase II dated September 4, 1998, October 1, 1998, December 22, 1998, (SVB) and January 12, 1999.
- S-2. Records of all safety-related reports and analyses shall be retained as follows:
- Copies of criticality and radiation safety analyses shall be retained for at least 2 years or for 6 months after a project is terminated, whichever is longer.
 - Copies of all other safety-related records (e.g., plant alterations and additions, abnormal occurrences associated with radioactivity releases, audits and inspections, instrument calibrations, ALARA findings, training and retraining, personnel exposures, routine radiation and environmental surveys) shall be retained for at least 2 years or longer if required by regulations.
- S-3. Notwithstanding the statements in Section 5.4.2 in the License Specification Volume (Part II), if double batching is not credible, the maximum safe batch size shall be no more than 75 percent of the minimum critical mass independent of the degree of water moderation and reflection. However, when the Th/U atomic ratio is ≥ 3.6 and the H/U ≤ 20 , the maximum safe batch size may be increased to 790 g contained U-235 independent of whether double batching is credible.
- S-4. The Director QACD, upon recommendation of the appropriate manager within QACD, shall have authority to require immediate termination of activities and/or corrective action in any situation which, in their judgment, could lead to the unnecessary exposure of personnel to ionizing radiation, release of radioactive material, loss or damage of property, or non-compliance with the license or a regulation.

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- S-5. The Criticality and Radiation Safety Committee (CRSC), functioning as an ALARA Committee, shall meet at least annually to review (1) reports of audits and inspections performed since the last ALARA review and (2) employee exposures and effluent release data to determine (a) if there are any upward trends developing in personnel exposures for identifiable categories of workers, types of operations, or effluent releases, (b) if exposures and releases might be lowered in accordance with the ALARA concept, and (c) if equipment for effluent and exposure control is being properly used, maintained, and inspected.

The CRSC evaluation, recommendations, and corrective actions shall be documented and the report shall be sent to the appropriate operations managers and the Vice President, Finance and Administration.

- S-6. Radiological Work Permits (RWPS) shall be issued for all unplanned or non-routine work with licensed material not covered by a WA. The RWP shall be signed by Health Physics management or a senior staff member before related work can commence. A senior staff member shall be a Health Physics Technician having a minimum of 5 years' experience in radiation safety. An evaluation of the safety effectiveness of the permit shall be made upon completion of the work.
- S-7. Radiation safety training, appropriate to the employee's needs, shall be given to all new employees.
- S-8. Radiation safety training and indoctrination shall be conducted by the Health Physics Manager or by a similarly qualified individual. The Health Physics Manager may delegate training in that portion of the course to an individual who is uniquely qualified to present it.
- S-9. Continuous air sampling shall be conducted in any area where licensed material can become airborne.
- S-10. The location of air samplers shall be checked annually and whenever any process or equipment changes are made to verify the representativeness of work area air sampling. In addition, the location of air samplers shall be checked at the commencement of operations in any area that has been shutdown for more than 6 months to verify the representativeness of air sampling.
- S-11. The laboratories in which plutonium in a dispersible form may be used shall have exhaust ventilation systems separate from other building exhausts and shall provide dual HEPA filtering of the effluent air.
- S-12. Sealed Plutonium sources shall be subject to the leak testing and actions specified in the attached "License Condition for Leak Testing Sealed Plutonium Sources," dated April 1993.
- Plutonium alpha sources shall be subject to the actions specified in the attached "License Condition for Plutonium Alpha Sources," dated April 1993.
- S-13. The licensee shall prepare and submit to the Chief, Licensing Branch, Division of Fuel Cycle Safety and Safeguards, NMSS, U.S. Nuclear Regulatory Commission, Washington, DC 20555, a report whenever there is any new residential development within 1 mile around the site that constitutes a significant change in parameters that may be affected by the release of radioactive materials into the environment.

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- S-14 Deleted by Amendment 14 dated August 3, 1990 (originally numbered S-23 in 1990 - 1992 and renumbered to S-14 in Amendment 23 dated October 7, 1993). The information in License Condition S-23 was incorporated into License Condition S-9 by adding the date of May 25, 1989; License Condition S-9 later became S-1.
- S-15. At the end of plant life, the licensee shall decontaminate the site and facilities, authorized as a place of use for special nuclear material, in accordance with the general decommissioning plan submitted by your letter dated July 25, 1986, and its supplement dated October 15, 1986, so that these facilities and grounds can be released for unrestricted use. The corporate commitment that funds will be made available for decommissioning the facility, provided by letter dated September 10, 1986, is hereby incorporated as a condition of the license.
- S-16. Release of equipment, facilities, or packages to the unrestricted area or to uncontrolled areas onsite shall be in accordance with the attached "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," dated April 1993.
- S-17. Deleted by Amendment 37, September 1996. The SVA facility has been decommissioned and released for general use.
- S-18. Notwithstanding the statement in Section 4.2.1.4, Part II of the license, the trip levels will be readjusted after each monthly test of the criticality alarm system if the alarm point fails to activate within approximately 5 seconds, more than once out of four trials.
- S-19. Notwithstanding the statements in Section 4.2.1.4, Part II of the license, no material handling shall be allowed in any area in which the required criticality alarm system is inoperative.
- S-20. Deleted by Amendment 37, September 1996. The SVA facility has been decommissioned and released for general use.
- S-21. Deleted by Amendment 31 dated September 1995. Fuel elements were shipped back to the licensee on October 3, 1988.
- S-22. Deleted by Amendment 37, September 1996. The SVA facility has been decommissioned and released for general use.
- S-23. The licensee shall maintain and execute the response measures described in the Emergency Plan dated October 10, 1997, supplemented by letter dated November 6, 1997; and Revision Date 10/98; or as further revised by the licensee consistent with the provisions of 10 CFR 70.32(I).
- S-24 The licensee shall develop individual survey plans for each facility or group of laboratories and provide NRC a 30-day notification, prior to GA initiating a final survey, to allow the NRC to schedule in-process inspections/surveys if required.

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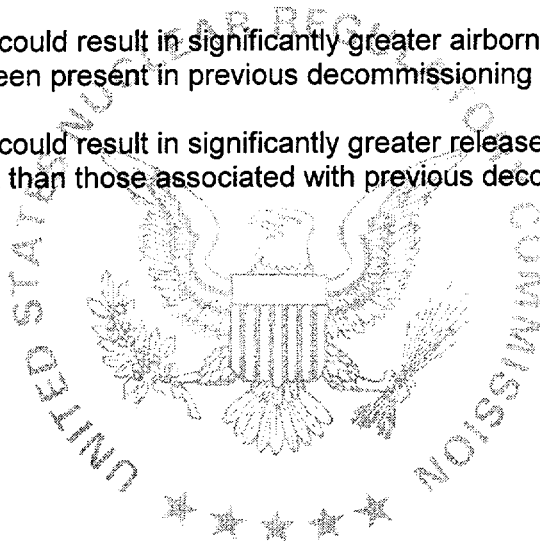
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S-25 The licensee must submit for review and approval to NRC residual contamination and characterization data and planned decommissioning procedures for areas where:

1. Decommissioning procedures will be required that have not been used by the licensee in previous decommissioning activities or have not been identified in the Site Decommissioning Plan dated October 11, 1996, as amended December 5, 1996; April 18, 1997; and January 15, 1998;
2. Workers would be entering areas where surface contamination and radiation levels are significantly higher than routinely encountered during previous decommissioning operations;
3. Procedures could result in significantly greater airborne concentrations of radioactive materials than have been present in previous decommissioning operations; or
4. Procedures could result in significantly greater releases of radioactive material to the environment than those associated with previous decommissioning operations.



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SAFEGUARDS CONDITIONS**SECTION 1.0 -- FACILITY ORGANIZATION**

Currently there is no license condition in this section. The necessary information has been incorporated into an approved Fundamental Nuclear Material Control Plan, dated February 1998.

SECTION 2.0 -- FACILITY OPERATION

- SG-2.1 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-2.2 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-2.3 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-2.4 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.

SECTION 3.0 -- MEASUREMENTS

- SG-3.1 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-3.2 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-3.3 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.

SECTION 4.0 -- MEASUREMENT CONTROL

- SG-4.1 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-4.2 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-4.3 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-4.4 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-4.5 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-4.6 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-4.7 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-4.8 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.

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SECTION 5.0 -- INVENTORY

- SG-5.1 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-5.2 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.
- SG-5.3 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.

SECTION 6.0 -- RECORDS AND REPORTS

- SG-6.1 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.

SECTION 7.0 -- INTERNAL CONTROL

- SG-7.1 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.

SECTION 8.0 -- MANAGEMENT

- SG-8.1 Deleted by Amendment 37, September 1996. Not applicable under a possession only license.

SECTION 9.0 -- PHYSICAL PROTECTION REQUIREMENTS FOR FORMULA QUANTITIES OF
STRATEGIC SPECIAL NUCLEAR MATERIAL

- SG-9.1 The licensee shall follow the measures described in the physical protection plan entitled, "Fixed Site and Transportation Plan for the Protection of Special Nuclear Material of Moderate and Low Strategic Significance," dated May, 1989, submitted by letter dated May 8, 1989; and as it may be further revised in accordance with the provisions of 10 CFR 70.32(e).

SECTION -10.0 -- TEMPORARY OR ONE TIME CONDITIONS

- SG-10.1 Deleted by Amendment 31, dated July 1995.
- SG-10.2 Deleted by Amendment 31, dated July 1995.
- SG-10.3 Deleted by Amendment 31, dated July 1995.



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 22, 1999

DOCKET: 70-734

LICENSEE: General Atomics (GA)
San Diego, California

SUBJECT: SAFETY EVALUATION REPORT: APPLICATION DATED OCTOBER 1, 1998,
REQUEST TO RELEASE "TORREY PINES WEST" LAND AREA FOR
UNRESTRICTED USE

BACKGROUND

By letters dated October 1, 1998, and January 12, 1999, GA applied for an amendment of its Materials License SNM-696 to delete "Torrey Pines West" land area at the GA facility located in San Diego, California, as a place of authorized use of licensed materials. In connection with its license amendment action, GA submitted a report titled "Radiological Survey Report for the Release of "Torrey Pines West" Land Area to Unrestricted Use." The proposed action is a continuation of GA's effort to decommission and decontaminate the facilities and land areas such that GA can eventually terminate its Material License from the Nuclear Regulatory Commission (NRC).

DISCUSSION

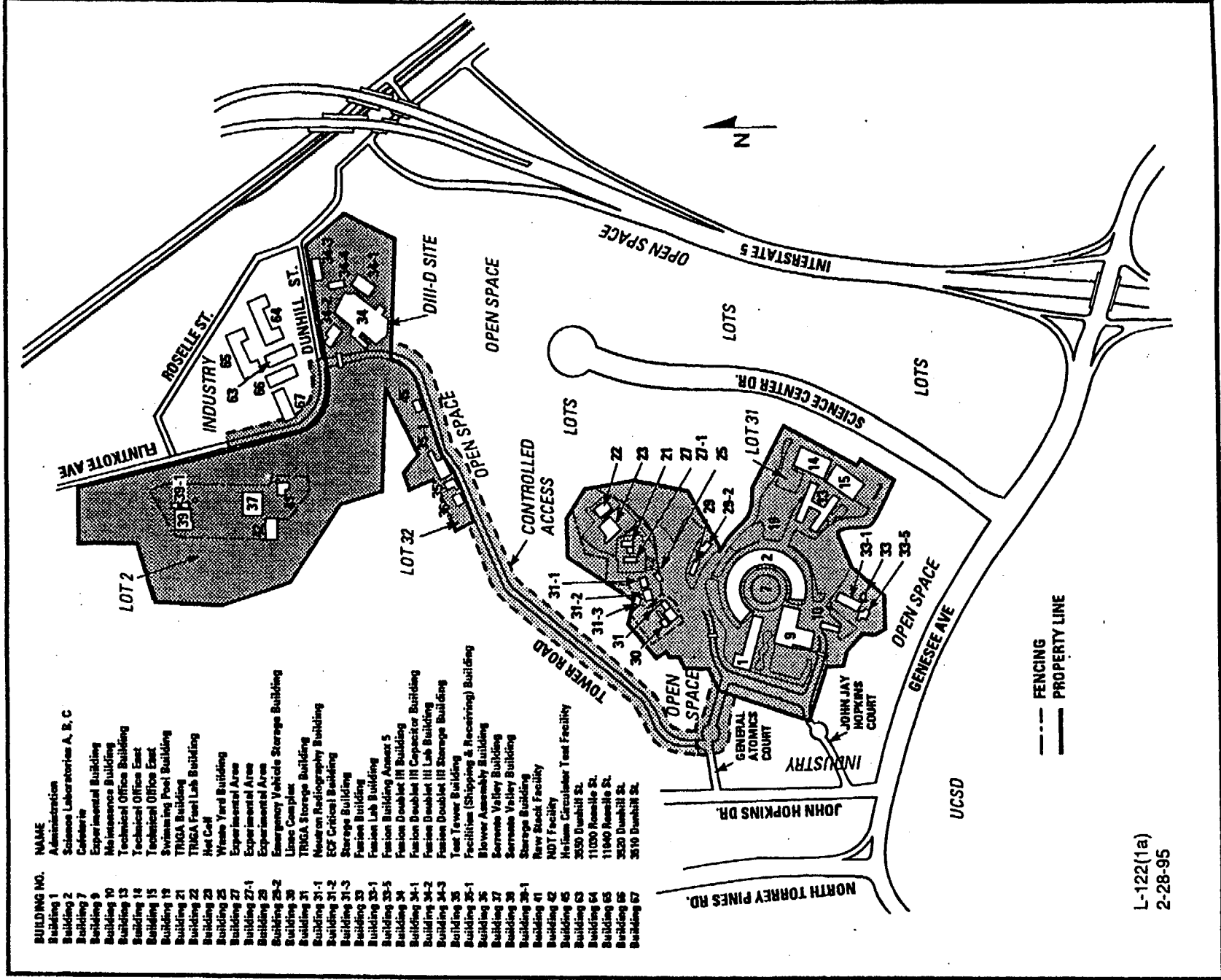
A. Description of the "Torrey Pines West" Land Area

The "Torrey Pines West" is located near GA's Building 30/31 complex. Figures 1-3 show (1) a plan view of the GA site (2) the location of the "Torrey Pines West" land area in relation to other facilities on GA's main site and (3) the "Torrey Pines West" land area. The total land area of the "Torrey Pines West" is about 1.85 acres. According to GA, the "Torrey Pines West" land area is an "unaffected area" which was never used for work involving radioactive materials; it was never used for the operation of radioactive materials, and there has been no releases or spills on it, nor is there any record of any releases or spills on other portions of GA's site that might have impacted it.

B. GA's Radiological Surveillance

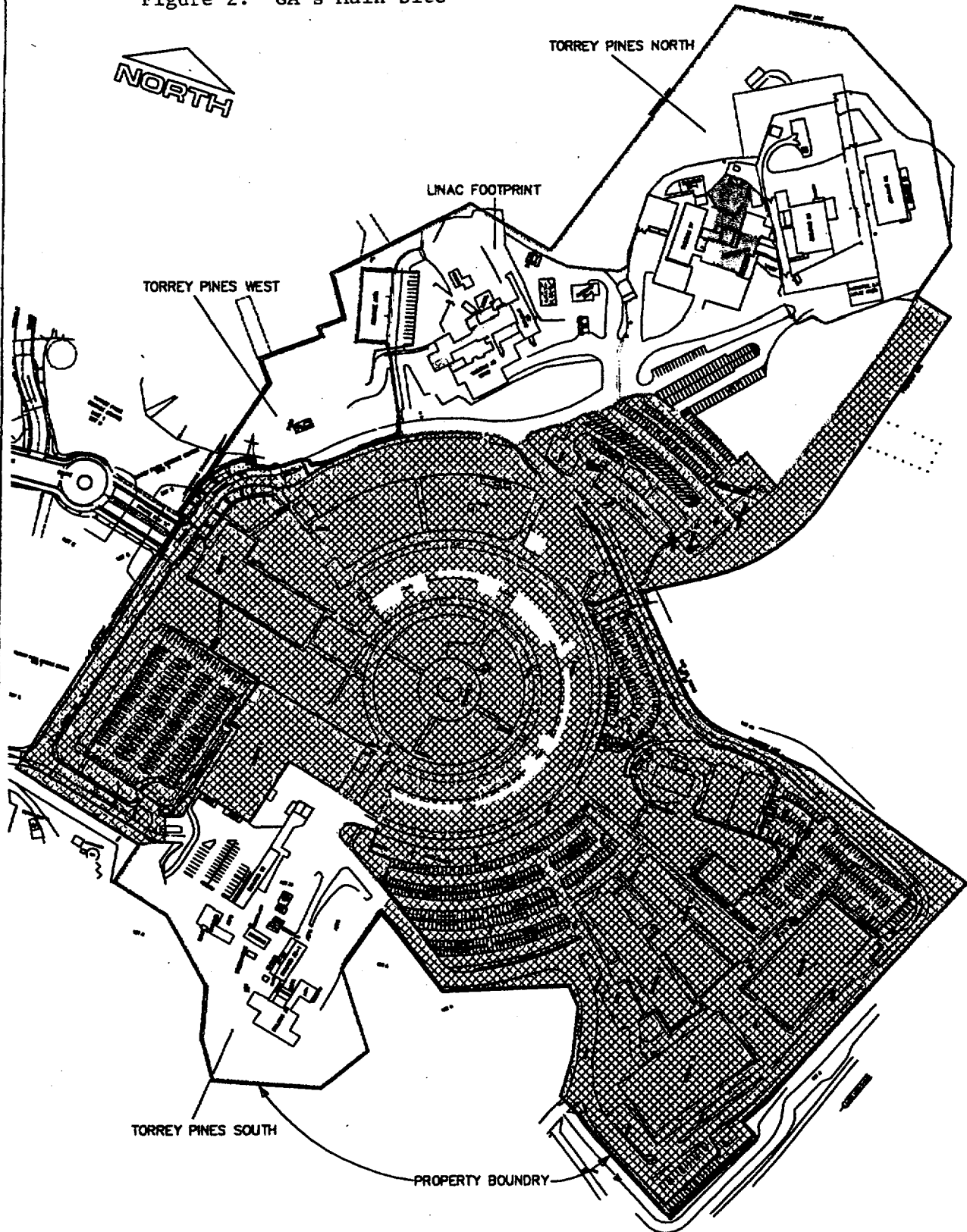
GA conducted measurements on gamma exposure rates and collected and analyzed soil samples at the site. The results are summarized in GA's submitted report. The staff has evaluated GA's results. The gamma exposure rates are essentially at background level (about 15 $\mu\text{R/hr}$) showing no significant levels of contamination. The NRC has established a release criterion for gamma exposure rate of 10 $\mu\text{R/hr}$ above background, i.e., a total exposure rate of 25 $\mu\text{R/hr}$ including background. None of the measurements show readings in excess of the release criterion. The staff evaluated the soil data and found that all radionuclides (uranium and thorium isotopes, Cs-137 and Co-60) are at background levels meeting NRC's release criteria.

Figure 1: General Atomics Site



L-122(1a)
2-28-95

Figure 2: GA's Main Site



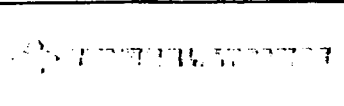
IMPACTED AREAS

 COMPLETE RELEASE TO UNRESTRICTED USE BY STATE & NRC

 TRIGA REACTOR

DATE: 04/30/97
DRAWN BY: [unintelligible]

PROJECT: PROJECT SITE DECOMMISSIONING
DESCRIPTION: TORREY PINES MESA



PROPRIETARY INFORMATION
UNCLASSIFIED
DATE: 04/30/97

REV	DESCRIPTION	DATE
1		04/30/97
2		05/08/97

APPROVED BY: S. LANEY
DATE: 04/30/97

TORREY PINES WEST

◆ Soil Sample Location

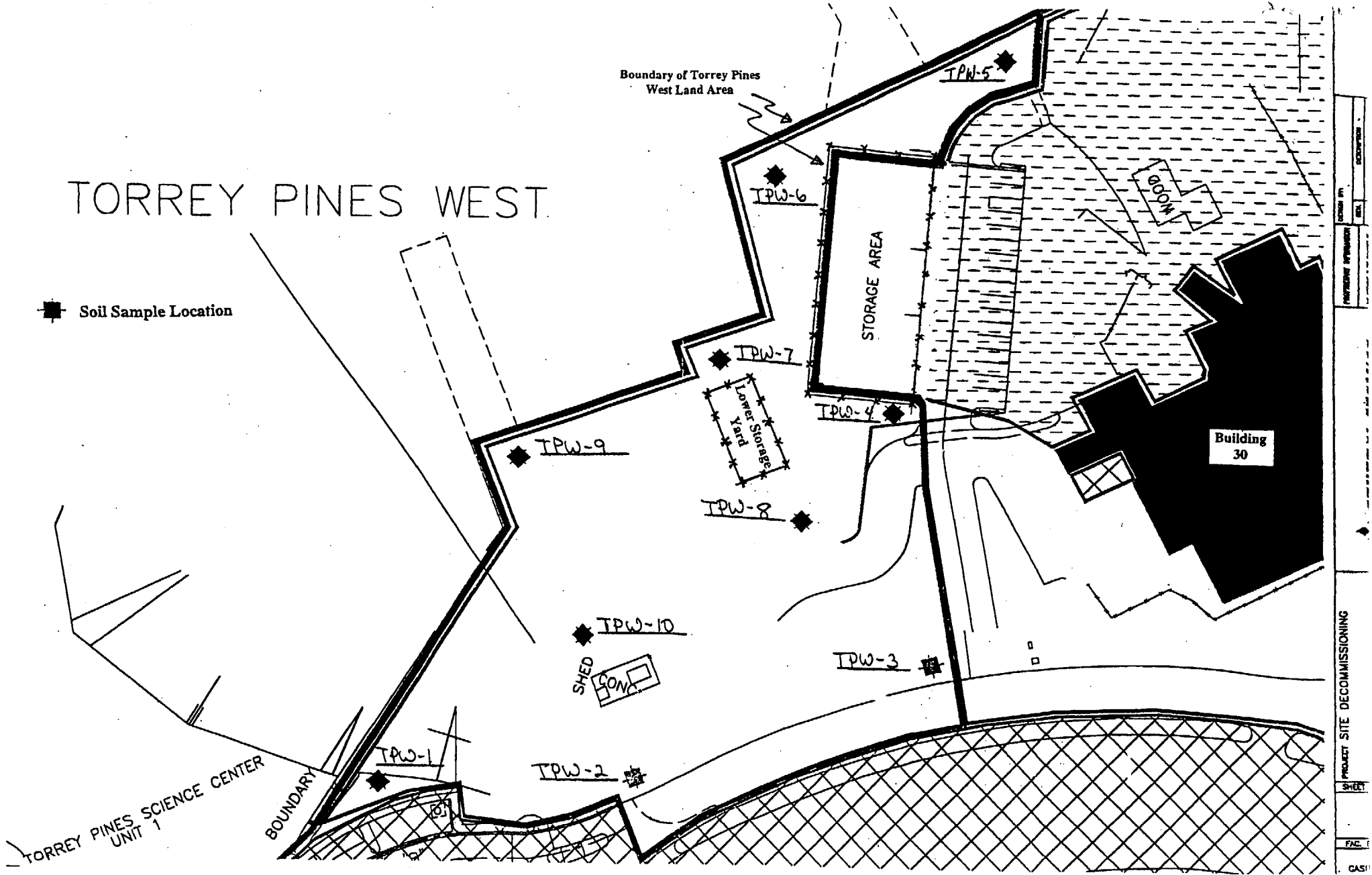


Figure 3: Torrey Pines West Site and Soil Sample Locations

PROJECT: SITE DECOMMISSIONING
SHEET: FAC: CASI

In addition, the NRC Regional Office conducted a screening independent check on exposure rates, and the NRC's independent measurements (see Inspection Report No. IR70-734/98-03) further verify GA's results. The NRC also checked GA's laboratory procedures and found that GA's analytical procedures are acceptable.

C. Environmental Review

GA has demonstrated that the "Torrey Pines West" land area meets the NRC's criteria for land released to unrestricted use and there is no significant impact to the environment if the NRC criteria are met.

Based on the information submitted by GA and NRC Regional Offices' independent verification, the staff has determined that the following conditions have been met:

1. There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite,
2. There is no significant increase in individual or cumulative occupational radiation exposure,
3. There is no significant construction impact, and
4. There is no significant increase in the potential for or consequences from radiological accidents.

Accordingly, pursuant to 10 CFR 51.22(c)(11), neither an environmental assessment nor an environmental impact statement is warranted for this action.

CONCLUSION

The staff concludes that GA's request to release the "Torrey Pines West" land areas for unrestricted use meets regulatory requirements and that there is reasonable assurance that the proposed action will not adversely impact upon the health and safety of the public or the environment.

The Region IV Principal Inspector has no objection to this proposed action.

Principal Contributor
Edward Y. Shum