



TALP
70-734

December 11, 1996
696-2658

Mr. Charles E. Gaskin
Licensing Section 1 / Licensing Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Docket No. 70-0734: SNM-696: **Urgent Request** for Off-site Disposal of
Soil/Asphalt from GA's Sorrento Valley Site

Reference: SNM-696 Amendment No. 35, "Hot Cell Decommissioning Plan Interim
Approval," dated May 1, 1996

Dear Mr. Gaskin:

General Atomics (GA) recently removed some underground piping from the area surrounding its Building 39. Building 39 housed GA's pilot plant fuel development facility and is located on GA's Sorrento Valley site. Thorium, depleted uranium and enriched uranium was used in Building 39 during facility operations; operations were discontinued in 1995.

In the process of removing the underground piping (none of which was radiologically contaminated), GA excavated approximately 7000 ft³ of soil, asphalt and/or gravel from these areas. GA wishes to dispose of this material/debris at a local landfill. To demonstrate that it meets the criteria for release to unrestricted use, GA collected approximately 35 samples of soil, asphalt and/or gravel from various locations and analyzed them by gamma spectroscopy. The results were then compared to the State and NRC approved release criteria summarized in the attached table. These criteria were most recently approved as part of GA's plan for decommissioning its Hot Cell Facility (Ref.), and are the same as were applied to the release of: GA's SVA Fuel Fabrication Facility, GA's Experimental Building (i.e., Building 9), GA's former waste processing facility, and several other projects at GA.

Also attached is a table which presents a summary of the results of the gamma spectroscopy analysis completed on each sample. As can be seen from the results, the uranium and thorium values are well below the criteria for release to unrestricted use. In fact, it is to be noted that the sum of the fractions using the average concentration of each nuclide and its corresponding release level is only 0.21.

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GA hereby requests authorization to release the soil, asphalt and gravel to unrestricted use so it can be disposed of as debris at the local landfill (Miramar Landfill). GA is also, under separate cover, requesting State of California authorization to release the subject material to unrestricted use.

It is urgent to GA to obtain a favorable reply to this request as soon as possible because GA is preparing for a holiday shutdown next week and has the resources available now to efficiently and immediately dispose of this material. Your assistance in this matter is greatly appreciated.

If you have any questions regarding the above, please don't hesitate to contact Laura Quintana at (619) 455-2758, or me at (619) 455-2823.

Very truly yours,



Dr. Keith E. Asmussen, Director
Licensing, Safety and Nuclear Compliance

Attachments: As stated in text

cc: Mr. Chuck Hooker, NRC Region IV, WCFO

Summary of Soil and Concrete/Asphalt Rubble Release Criteria*

<u>Isotope</u>	<u>Release Criteria (pCi/g)</u>
Thorium (^{232}Th & ^{228}Th)	10
Depleted U (^{238}U)	35
Enriched U (^{234}U & ^{235}U)	30

NOTE: the ratio of ^{234}U to ^{235}U is conservatively taken to be 30, therefore the limit on the concentration of ^{235}U is 1.0 pCi/g.

- * These release criteria are from NRC Policy Issue SECY-81-576, dated October 5, 1981, and are in various NRC- and State of California-approved decommissioning plans of General Atomics, including the GA Hot Cell Facility Decommissioning Plan, dated November 1995.

SOIL SAMPLES: SVB SOIL PILE⁽¹⁾

Radionuclide Concentration (Background not subtracted)

SAMPLE NO.	U-238		U-235		Th-232		Th-228		Total Thorium	
	pCi/gm	±	pCi/gm	±	pCi/gm	±	pCi/gm	±	pCi/gm	±
DP1	4.61	1.60	0.16	0.09	1.60	0.41	0.84	0.12	2.44	0.53
DP2	3.10	1.50	0.15	0.08	1.90	0.60	3.00	0.27	4.90	0.87
DP3	3.30	1.50	0.02	0.09	1.80	0.47	3.10	0.42	4.90	0.89
DP4	5.20	1.90	0.17	0.13	1.80	0.63	2.80	0.43	4.60	1.06
DP5	3.80	1.60	0.17	0.02	1.70	0.48	2.50	0.37	4.20	0.85
DP6	2.00	1.50	0.12	1.00	1.20	0.43	1.80	0.35	3.00	0.78
DP7	1.90	1.30	0.12	0.80	0.98	0.50	1.80	0.90	2.78	1.40
DP8	5.80	1.80	0.22	0.10	1.70	0.70	2.30	0.40	4.00	1.10
DP9	2.30	1.40	0.12	0.08	1.40	0.25	1.60	0.60	3.00	0.85
DP10	1.70	1.00	0.14	0.09	1.40	0.35	1.70	0.36	3.10	0.71
DP11	1.90	1.30	0.18	0.08	1.11	0.44	1.99	0.75	3.10	1.19
DP12	4.10	2.00	0.18	0.11	2.00	0.49	2.30	0.40	4.30	0.89
DP13	4.10	1.70	0.22	0.14	1.90	0.50	2.80	0.40	4.70	0.90
DP14	3.20	2.60	0.13	0.10	1.95	0.80	2.30	0.40	4.25	1.20
DP15	1.60	1.50	ND		0.88	0.30	1.80	0.50	2.68	0.80
DP16	ND		0.12	0.08	1.10	0.50	1.40	0.30	2.50	0.80
DP17	4.10	1.70	0.20	0.11	1.70	0.50	2.60	0.40	4.30	0.90
DP18	5.60	1.90	0.18	0.10	1.90	0.60	2.60	0.40	4.50	1.00
DP19	3.90	1.50	0.24	0.10	1.80	0.40	2.60	0.40	4.40	0.80
DP20	ND		0.09	0.08	1.10	0.41	1.60	0.40	2.70	0.80
DP21	3.50	1.60	0.30	0.10	1.70	0.50	2.70	0.40	4.40	0.90
DP22	5.20	1.90	0.25	0.10	1.90	0.60	3.60	0.90	5.50	1.50
DP23	1.70	1.20	ND		0.44	0.10	0.97	0.50	1.41	0.60
DP24	2.60	1.30	0.12	0.07	1.40	0.50	2.20	0.40	3.60	0.90
DP25	5.20	1.90	0.24	0.10	1.60	0.50	1.00	0.10	2.60	0.60
S6-37	2.98	1.40	0.17	0.08	0.89	0.16	1.40	0.27	2.30	0.53
S6-38	3.90	1.70	0.14	0.10	0.92	0.14	1.60	0.48	2.50	0.62
S6-39	4.40	1.90	0.26	0.11	0.91	0.13	1.80	0.48	2.70	0.61
S36-41	4.10	1.90	0.14	0.10	1.01	0.15	1.80	0.60	2.80	0.75
S36-42	2.40	1.40	0.09	0.08	0.62	0.01	1.10	0.50	1.70	0.60
S36-43	1.80	1.30	0.11	0.08	0.45	0.12	1.30	0.80	1.75	0.92
S6-32	3.94	2.60	0.13	0.07	0.93	0.03	1.57	0.09	2.50	0.12

S6-45	1.70	1.10	0.10	0.09	0.40	0.06	0.90	0.41	1.30	0.47
S36-46	3.80	1.70	0.21	0.11	0.95	0.14	1.95	0.53	2.90	0.07
CG40 ⁽²⁾ (Gravel)	4.44	2.50	0.22	0.02	4.20	0.04	6.90	0.12	11.10	0.16
Average ⁽²⁾	3.45		0.16		1.41		2.12		3.53	

⁽¹⁾ A total of ~7000 ft³ of soil/asphalt/gravel to be disposed of. The material resulted from the removal of underground pipes.

⁽²⁾ Maximum concentration in any one sample.

$$\text{Sum of Fractions (background subtracted): CG40} = \frac{2.3}{35} + \frac{0.02}{1} + \frac{7.4}{10} = \underline{0.83}$$

⁽²⁾ Average, background not subtracted.

Average: Sum of Fractions (background subtracted): Average = 0.21