RAS 11050

U.S. NUCLEAR REGULATORY COMMISSION
In the Matter of Louisiana Energy Services, L.P.
Docket No. 70-3103-ML Official Exhibit No. Staff 41
OFFERED by: Applicant/Licensee Intervenor
NRC Staff Other
IDENTIFIED on 10/25/05 Witness/Panel Staff Decomversion
Action Taken: ADMITTED REJECTED WITHDRAWN
Reporter/Clerk Bethany Engel

November 15, 1996

Mr. L. J. Maas
Manager, Regulatory Compliance
Siemens Power Corporation
2101 Horn Rapids Road
Richland, Washington 99352-0130

SUBJECT: RENEWAL (TAC NO. L21656)

Dear Mr. Maas:

In accordance with your application dated October 28, 1996, and revised pages submitted with your letter dated November 11, 1996, and pursuant to Part 70 to Title 10 of the Code of Federal Regulations, Materials License SNM-1227 is hereby renewed.

You are hereby advised that any requests for amendment to this license should be submitted in the form of replacement pages to the License Condition section and, if necessary, to the Safety Demonstration section with the changes or new items clearly identified. Any amendment application for a new process or major facility change should be supported with a multi-disciplinary safety analysis. This analysis should be well documented and integrate the disciplines of nuclear criticality safety, radiation safety, environmental protection, chemical process safety, and fire protection.

This license is renewed for a 5-year term, expiring November 30, 2001. This renewal is issued following preparation of an Environmental Assessment (EA). Based on this assessment a Finding of No Significant Impact (FONSI) has been prepared pursuant to Part 51 to the Code of Federal Regulations. On June 27, 1995, the FONSI was published in the Federal Register. By correspondence dated June 20, 1995, we provided you with copies of the EA and FONSI.

Enclosed are copies of renewed Materials License SNM-1227 and the Safety Evaluation Report.

If you have any questions regarding this licensing action, please contact the Project Manager Ms. Mary Adams, at (301) 415-8111.

Sincerely,

Original signed by: E. Ten Eyck for

Robert C. Pierson, Chief
Licensing Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS

Docket 70-1257
License SNM-1227
Renewal

Enclosures: 1. Renewed Materials License SNM-1227
2. Safety Evaluation Report

DISTRIBUTION: (Control No. 1BOS)

Docket 70-1257	PUBLIC	NRC File Center	Region IV
NMSS r/f	~~FCDB r/f~~	FCLB r/f	SHO
CHooker, RIV	PMDA	JRoth, FCOB	BHorn, FRIB

evious concurrence

OFC	FCLB	E	FCLB*		FCLB*	E	FCLB*	E	FCLB*	2E	FCLB	N	FCLB*

Template = SECY-027 SECY-02

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ADJUDICATIONS STAFF

Safety Evaluation Report

for the Renewal of

Special Nuclear Material License SNM-1227

for the

Siemens Power Corporation

Richland Engineering and Manufacturing Facility

Richland, Washington

Docket 70-1257

November 1996

2.12.10 Authorized Release Guidelines for Hydrofluoric Acid

The applicant has requested authorization to release hydrofluoric acid manufactured by the dry conversion process for unrestricted commercial use providing the following three conditions are met:

1. A representative sample of each batch of hydrofluoric acid product shall be obtained and analyzed for uranium;

2. A batch shall be no larger than 20,000 liters; and

3. The activity of any batch released for unrestricted use shall be less than or equal to 3 picocuries per milliliter ($\leq$3 pCi/ml).

SPC requested this authorization in an amendment application dated June 28, 1994, and supplement dated July 7, 1994. The environmental and public health risks of the release of the hydrofluoric acid were evaluated and described in an Environmental Assessment prepared by NRC, and a Finding of No Significant Impact (FONSI) was published in the Federal Register on September 14, 1994, (59 FR 47190). NRC determined that doses to a maximally exposed individual resulting from release and subsequent commercial use of the acid will not exceed the standards for protection against radiation set forth in 10 CFR Part 20 and are ALARA. NRC staff has, therefore, determined that this authorization is acceptable under the commitments of the license.

2.12.11 Authorized Release Guidelines for Ammonia

In a letter dated August 10, 1995, SPC proposed a uranium release limit for ammonium hydroxide (NH_4OH) to be sold under the renewed license. This limit is 0.05 mg/l of 5% enriched uranium, equivalent to 0.13 pCi/g. This ammonium hydroxide could be used in the manufacture of ammonia fertilizer, or for other industrial uses.

The risk to human health was evaluated for the use of this ammonium hydroxide as fertilizer. Information on application rates for ammonia were obtained from the Walla Walla Farmers Co-op in Kennewick, Washington. An average application of nitrogen is 30-40 pounds per year, injected into the top 3" of soil. SPC's ammonium hydroxide is approximately 25 percent by weight; therefore a farmer would apply 120-160 pounds per year to obtain the desired amount of nitrogen. If this amount of ammonium hydroxide were applied to a field every year for the 10-year term of the license, and if none was removed via leaching, erosion, or other natural processes, it would result in a concentration of less than 2×10^{-5} pCi/g in the top 3 inches of soil. Offsite uranium concentrations in soil, as reported in Hanford Site Environmental Report 1993, Table A.19, indicate averages of 0.75, 0.73, and 1.29 pCi/g for 1988, 1989, 1990, respectively. The increase in uranium concentration caused by application of fertilizer containing 0.05 ppm uranium, under the conservative assumptions indicated, is insignificant compared to these background concentrations.

Based on the above analysis, the NRC staff has determined that sale of ammonium hydroxide containing not more than 0.05 ppm uranium will have no significant effect on public health or the environment and is therefore acceptable.