

9693



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DOCKETED
USNRC

JAN 15 1990

'90 JAN 18 P2:22

Peter B. Bloch
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Gustave A. Linenberger, Jr.
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of
ROCKWELL INTERNATIONAL CORPORATION
Rocketdyne Division
Docket No. 70-25-SNM No. 21 - ML
ASLBP No. 89-594-01-ML

SERVED JAN 18 1990

Dear Administrative Judges:

By this letter, we are transmitting to you copies of the following background information for inclusion in your files:

12/06/89 Ltr RLancet to LRouse transmitting supplemental information for the renewal application

12/22/89 Ltr RLancet to GSjoblom transmitting info on TRUMP-S program

Sincerely,

Virginia Tharpe
Virginia Tharpe
Uranium Fuel Section
Fuel Cycle Safety Branch
Division of Industrial and
Medical Nuclear Safety, NMSS

Enclosures: As stated

cc: ASLAP (3)
LPDR
SECY

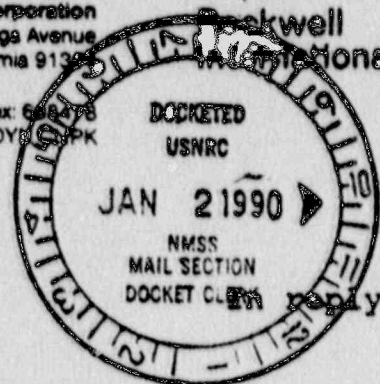
9001250096 900115
PDR ADOCK 07000025
C PDR

DS02

70-25
PDR

Rocketdyne Division
Rockwell International Corporation
6633 Canoga Avenue
Canoga Park, California 91304

Telex: 688470
ROCKETDYNE CPK



December 22, 1989

reply refer to 89RC16167

Glen L. Sjoblom
Acting Chief
Fuel Cycle Safety Branch
Division of Industrial and
Medical Nuclear Safety,
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Supplement to Application for Renewal
to License No. SNM-21, Docket 70-25 issued
to Rocketdyne Division of Rockwell International
Corporation.

Reference: RI Letter R.T. Lancet to Leland C. Rouse,
"same subject", 89RC14432, December 6, 1989

Dear Mr. Sjoblom:

In the reference letter we provided additional clarification and information as requested by members of your staff. This letter provides additional clarification to our license renewal request by defining the limited R&D associated with the amended license use reduction to 6g of plutonium (SNM-21 license amendment No. 4, December 12, 1989).

The R&D to be performed is limited to the first phase of the TRUMP-S program. The purpose of the TRUMP-S program at Rocketdyne is to develop fundamental thermodynamic and electrochemical data on various actinide materials so that processes can be developed to separate long-lived radioactive isotopes from spent nuclear fuel. These long-lived isotopes would be destroyed (fissioned) in a nuclear reactor or accelerator, thereby eliminating the long-term hazard associated with the disposal of spent nuclear fuel. The program at Rocketdyne will use small quantities of actinide materials with the work being performed in a facility with multiple barriers to guard against their release to the environment.

89RC16167

22 December, 1989

Page 2.

For the first phase of the TRUMP-S program, five grams of plutonium have been procured and are stored in the Source and Special Nuclear Material Vault (TO64). As required, material will be transferred to the RIHL (building T020). Material handling will be conducted within an inert atmosphere glove box in the Alpha Room of this facility. The inert atmosphere (high purity argon) is required for experimental reasons; e.g. atmospheric air, carbon dioxide and water vapor will interfere with the test. No more than one gram of plutonium will be in the glove box at one time. Approximately 0.1 gram of plutonium (or less in some experiments) will be dissolved in molten cadmium (-500 C) in the test cell. The cell is made up of ceramic (aluminum oxide) and metal (tantalum) parts. A low-melting salt (lithium-potassium chloride) is added, and stirrers and various electrodes are placed in the cell. The overall dimensions of the cell are approximately 2 in. diameter and 5 in. tall. From the internal configuration of the cell and varying the mode of operation such fundamental data as free energy of formation, activity coefficients in the metal and salt phases, valence states in the salt, and characteristics of deposits are obtained. A particular run may last from one day to one week. The same cell loading of plutonium and salt may be used in several runs. During a run, the entire operation is monitored and controlled with a computer.

In order to confirm the electrochemical results, one or two chemical samples of the cadmium and salt will be taken during the test. The total weight of each sample will be less than one gram (approximately 0.1 gram.) The samples will be dissolved in acid in a gloved hood and first analyzed for plutonium by radioactive counting. Based on the radiochemical analysis, an aliquot of the chemical sample will be prepared that will contain no more than 10 microcuries. This sample will undergo chemical analysis of the non-radioactive constituents by inductively-coupled plasma (ICP) analysis. The ICP unit is installed in a glove box.

If you have any questions or require additional information, please call me at (818) 718-3461.

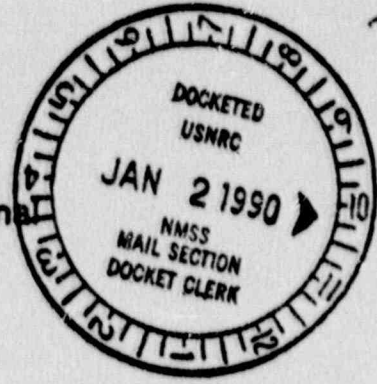
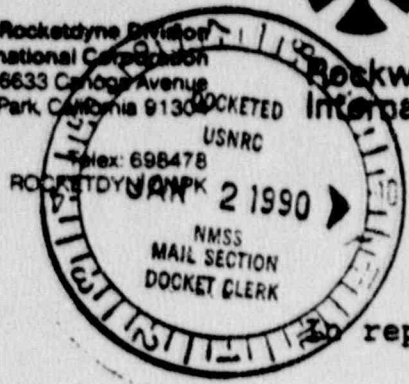
Very truly yours,

R. T. Lancet

R.T. Lancet, Director
Nuclear Safety & Licensing

70-25
PDR

Rocketdyne Division
Rockwell International Corporation
6633 Canoga Avenue
Canoga Park, California 91304



December 6, 1989

In reply refer to 89RC14432

Leland C. Rouse
Fuel Cycle Safety Branch
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission
Washington D.C. 20555

Subject: Supplement to Application for Renewal to License No. SNM-21, Docket 70-25 issued to Rocketdyne Division of Rockwell International Corporation

- Reference:
1. RI Letter R.T. Lancet to Leland C. Rouse "Same Subject", 89RC13898, November 5, 1989
 2. RI Letter, R.T. Lancet to Leland C. Rouse "Application for Renewal of License No SNM 21 Docket 75-20 issued to the Rocketdyne Division of Rockwell International Corporation, 89RC06668 May 25, 1989.
 3. NRC Letter, Leland C. Rouse to Attn: Dr. M.E. Remley dated March 8, 1989

Mr. George Bidinger and Ms. Merri Horn of your staff, on November 22, 1989, requested that we modify our supplement to the application, Reference 1 to specify a "termination" date and provide a time when the decommissioning plan for the Rockwell International Hot Laboratory will be submitted. This letter modifies and replaces Reference 1 to provide the additional information.

In the Reference 2 letter we requested renewal of the subject license, as revised by Amendment 2 (reference 3).

This supplement requests that the following changes be made to reference 2 renewal request.



Rockwell
International

89RC14432
6 December, 1989
Page 2.

1. The use limit be reduced to less than 6g of Pu for research and development (R&D) activities.
2. The possession limit be reduced to 400g of special nuclear material (SNM) to cover the 6g of Pu for use in R&D activities and potentially up to 394g of SNM contamination distributed in the Rockwell International Hot Laboratory.
3. The license is to terminate October 30, 1990.
4. Subsequent to October 30, 1990 the only activities will be to complete the decontamination and decommissioning of the Rockwell International licensed facility(ies).
5. A plan for completion of decommissioning will be provided for review by March 15, 1990.

If you have any questions or require additional information, please call me at (818) 718-3462.

Very truly yours,

R.T. Lancet, Director
Nuclear Safety and Licensing

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of

ROCKWELL INTERNATIONAL CORPORATION

(Rocketdyne Division, Special
Nuclear Materials License SNM-21)

Docket No.(s) 70-25-ML

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing THARPE LTR DTD 1/15 have been served upon the following persons by U.S. mail, first class, except as otherwise noted and in accordance with the requirements of 10 CFR Sec. 2.712.

Administrative Judge
Christine N. Kohl, Chairman
Atomic Safety and Licensing Appeal
Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Administrative Judge
Howard A. Wilber
Atomic Safety and Licensing Appeal
Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Administrative Judge
Gustave A. Linenberger, Jr.
Special Assistant
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

R. T. Lancet
Director
Rockwell International Corporation
Rocketdyne Division
6633 Canoga Avenue
Canoga Park, CA 91304

Jon Scott
6 Roundup Road
Bell Canyon, CA 91307

Administrative Judge
G. Paul Bollwerk, III
Atomic Safety and Licensing Appeal
Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Administrative Judge
Peter B. Bloch
Presiding Officer
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Office of the General Counsel
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Daniel Hirsch
President
Committee to Bridge the Gap
1637 Butler Avenue, Suite 203
Los Angeles, CA 90025

Estelle Lit
18233 Bermuda Street
Northridge, CA 91326

Docket No. (s)70-25-ML
THARPE LTR DTD 1/15

Jerome E. Raskins, et. al.
c/o 18350 Los Alimos
Northridge, CA 91326

Donald W. Wallace
1710 North Cold Canyon Road
Culababas, CA 91302

Mary Nichols, Esquire
Counsel for Natural Resources
Defense Council
1350 New York Avenue, NW
Washington, DC 20005

Sheldon C. Plotkin, Ph.D, P. E.
Executive Board Representative
Southern California Federation of
Scientists
331B Colbert Avenue
Los Angeles, CA 90066

Barbara Johnson
President
Susana Knolls Homeowners Association
c/o 6714 Clear Springs Road
Susana Knolls, CA 93063

John Sherman, M.D.
25067 Lewis and Clark Road
Hidden Hills, CA 91302

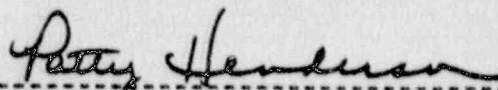
Daniel Gross, M.D.
24835 Long Valley Road
Hidden Hills, CA 91302

John Douglas, M.D.
99 Buckskin Road
Conago Park, CA 91307

Richard Rubenstein, M.D.
39 Appaloposa Lane
Canoga Park, CA 91307

Cecelia Riddle
Senior Librarian
Chatsworth Branch Library
21052 Devanshire Street
Chatsworth, CA 91311

Dated at Rockville, Md. this
18 day of January 1990



Office of the Secretary of the Commission