



Rockwell International  
Atomic International Division

# SUPPORTING DOCUMENT

NUMBER

NO01ER100004

REV LTR/CHG NO.

SEE SUMMARY OF CHG

PROGRAM TITLE

L-85 REACTOR

DOCUMENT TYPE

ENGINEERING REPORT

KEY NOUNS

REACTOR OPERATION

DOCUMENT TITLE

L-85 REACTOR - ANNUAL OPERATIONS FOR THE  
YEAR 1978

ORIGINAL ISSUE DATE

GO NO.

S/A NO.

PAGE 1 OF

TOTAL PAGES 3

PREPARED BY/DATE

DEPT

MAIL ADDR

V. A. Swanson

731

T093

094117

REL DATE

2-8-79

SECURITY CLASSIFICATION

(CHECK ONE BOX ONLY)

ERDA DOD

UNCL ☐

CONF. ☐

SECRET ☐

(CHECK ONE BOX ONLY)

RESTRICTED

DATA ☐

DEFENSE

INFO. ☐

IR&D PROGRAM? YES ☐ NO ☒ IF YES, ENTER TPA NO.

APPROVALS

M. E. Remley

J. H. Walter

DATE

AUTHORIZED  
CLASSIFIER

DATE

DISTRIBUTION

ABSTRACT

* NAME	MAIL ADDR
* Johnson, V.A. (25)	LA34
* Maki, L.M.	LB39
* Paschall, R.K.	JB05
* Remley, M.E.	NB13
* Schumann, G.	T093
* Swanson, V.A.	T093
* Tuttle, R.J.	NB13
* Twichell, P.W.	JB05
* Walter, J.H.	T006
* Wieseneck, H.C.	LA21

This report presents a summary of the reactor operations and related activities conducted at the L-85 Reactor during 1978. This satisfies a reporting requirement in the facility technical specifications.

RESERVED FOR PROPRIETARY/LEGAL NOTICES

\* COMPLETE DOCUMENT

NO ASTERISK, TITLE PAGE/SUMMARY  
OF CHANGE PAGE ONLY

7905080513

7905080513



1. SUMMARY OF OPERATING EXPERIENCE

The L-85 Reactor was operated without incident during calendar year 1978. Three hundred eight (308) runs were made for a total integrated thermal power output of 560,691 watt-hours. Two hundred thirty-nine (239) runs were for neutron radiography, sixty-four (64) for training programs, and five (5) for routine checks.

2. EMERGENCY SHUTDOWN AND INADVERTENT SCRAMS

Five inadvertent scrams occurred during the year. All five were caused by electrical noise entering the core pressure electronic trip channel. A digital panel meter (DPM) was connected to the recorder output of the electronic trip channel during the time the scrams occurred and electrical switching noise was apparently being picked up by the DPM or the connecting wiring and causing the scrams. All scrams operated properly and scram levels were not exceeded.

3. MAJOR MAINTENANCE OPERATIONS

The electrical cable connecting the "magnets coupled" microswitch on Safety Rod #2 to the startup interlock circuit opened up and prevented a reactor startup. The cable-pulley system was replaced by a retractable cable system.

The sensor bulb of a thermostat which limits the temperature of the cold water tank in the core cooling system, separated from the tubing connecting it to the controller. This caused the freon compressor to shut off at a higher temperature than normal in the cold water tank. No safety related problems were involved. The broken thermostat, along with another identical unit in the cold water tank, were removed and replaced by thermostats with sensor bulbs inside of stainless steel wells.

Other normal maintenance and minor repairs were performed as required.

4. CHANGES TO FACILITY AND PROCEDURE

A battery powered emergency power system was installed which supplies power to the reactor room gamma monitor in the event of a power outage in the facility. This system will be expanded to include the core pressure readout as soon as electrical noise problems, which have resulted



in the electronic trip channel when connected to the system, can be resolved.

5. RELEASE OF RADIOACTIVE EFFLUENTS

No uncontrolled radioactive effluents were released or discharged to the environs during the year.

6. ENVIRONMENTAL SURVEYS

Environmental surveys are performed by the Radiation and Nuclear Safety Unit by sampling soil, vegetation, water and air up to a distance of 10 miles from Energy Systems Group, California sites. A report by J. D. Moore\* describing the monitoring procedures and results for 1978 summarizes these surveys. This report concludes that environmental radioactivity observed by the monitoring is due to natural sources and to fallout of radioactive material from foreign atmospheric testing of nuclear devices rather than to Energy Systems Group operations at California sites.

\* J. D. Moore, "Energy Systems Group Environmental Monitoring and Facility Effluent Annual Report - 1978"