

PRNC031

PRNC~-31

PUERTO RICO NUCLEAR CENTER

OPERATING LIMITS

?or

L~77 REACTOR

JA ontaren ny Unvensity OF PUERTO RICO UNDER CONTRACT
NO. AT (40-11-1893 FOR U. \$. ATOMIC ENEROY COMMISSION

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PUERTO RICO NUCLEA?

dare the Operating Limits of the L-77

Reactor that have been revised by the Technical
Committee, They are hereby approved and put into

effect as of January 2, 1964,

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1} Yi week g

Bx. temp Comers

Injury Hiswecor

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PUERTO RICO NUCLEAR CENTER

OPERATING LIMITS

for

L-77 reactor

January 2, 1964

Operated by University of Puerto Rico under contract

Now AT(40-1)-1833 for O. S. Atomic Energy Commission

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Ae

Be

OPERATING LOGS

P.R.M.C. L077 REACTOR

Reactor Stopping

A&R conditioned, controlled access,

Primary Coolant

Secondary Coolant

Be

a

h

8

Maximum permissible reactivity above
cold clean critical

Maximum power level

Maximum burnup

Maximum fuel temperature

Maximum moderator temperature

Maximum permissible fuel loading

Maximum reactivity to be held in
experiments

Maximum peak to average flux ratio

Control & Safety System

a

3.

be

Minimum shutdown ratio, (safety 44/ core 47)

Minimum shutdown margin, (safety e- core ae)

Maximum reactivity addition rates

Minimum reactivity reduction rate

0.5% AK/K

10 watts

No plititit

axblont

That amount which

results in no

than 0.5% excess

reactivity (1392

rans logs actual)

ict more than 0.5%

ark

1.60

5.2

2.1% Oke

0.00758 aK/K /at

0.007% ak /K /see

average for normal

control

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5. Minimm source rate for start-up 2.0008 N/eee

Maximu scram gottings

a. poner 150K of rated power

be pertod 5 sec.

7. Mindssoe frequency of seran teat one month

©, Minimum number and kinds of instrument

channels for operation two

a, Linear microammeter circuit with

contacts at either

b. Seven decade logarithmic micro-

ammeter and period never constant ion

circuit with U.T.C. and adjustable

high-power-level screw setting,

Period meter has adjustable short

period screw setting.

F, Monitoring system

2, Minimum number and kinds of instrument

channels three

?Twin recording area radiation monitor

with gamma and beta-camera detectors,

be Constant air monitor.

G. Experimental Facilities:

1, Maximum total allowance for experimental facilities On5kA K/e

2, No allowance made for potting, fuel burnup, or temperature coefficient.

3. Insertion of new experiment must be approved by Reactor Division Head, he may request consultation from the Technical Committee and may postpone initiation of the experiment until adequate consultation is accomplished,

H, Administrative and Procedural Safeguards

2, Minimum personnel qualifications

8, Reactor Division head

i, minimum technical degree

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LL at least one year of eraduate work

AA adequate nuclear actence experience

b. Reactor Supervisor

1 technical desree

44 background in nuclear scfence and/or

onginieering

S44 adequate experience tn reactor

operation supervision

ce Reactor Cperators

4

snonth theoretisal and practical

course in reactor operation

Minima operating personnel requirements

4, Normal operatien one reactor operator

b, Operations involving fuel leading,

Few experimental setups, nuclear in-

strumentation and control maintenance ?at least one opera

tor, one reactor

supervisor and other

personnel as required,

Minimr: recerds to be kept

a + form 400, Check List ~ start-up

BN " GOL, Check List ~ Operations

and Shut. Down

8 "402, Weeidy Report

ao? "1GL, Weekly and Monthly

Check List

Minbmm leading ateps

No deviation from the procedures set forth ty.

?the mnual, "Procedures for Installation and

Reloading of 1-77 Reactor" {8 to bo allowed,

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