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CORPORATE
RESEARCH LABORATORY

January 8, 1979

U. S. Nuclear Regulatory Commission
Division of Reactor Licensing
Washington, D. C. 20555

Attn: Mr. Robert W. Reid
Assistant Director for Operating Reactors,
Branch 4

Subj: Annual Report: Docket 50-54 License R-81.

Dear Mr. Reid:

The following Annual Operating Summary for Union Carbide's Sterling Forest Reactor for the year 1979 is herewith submitted.

Very truly yours,

John W. Paradiso
Reactor Supervisor

JWP:js
Attachment (21 copies)

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R

ANNUAL REPORT FOR 1978 FOR THE UNION CARBIDE NUCLEAR REACTOR (UCNR) DOCKET 50-54, LICENSE R-81

A. FACILITY MODIFICATIONS AND MAJOR MAINTENANCE

1. The core Delta-T system was calibrated and a digital readout was installed in the control room.

2. The Linear-N system recorder and electrometer was replaced.

B. PROCEDURES MANUAL

1. A new procedure was added for control rod calibration by the "Rod Bump" method.

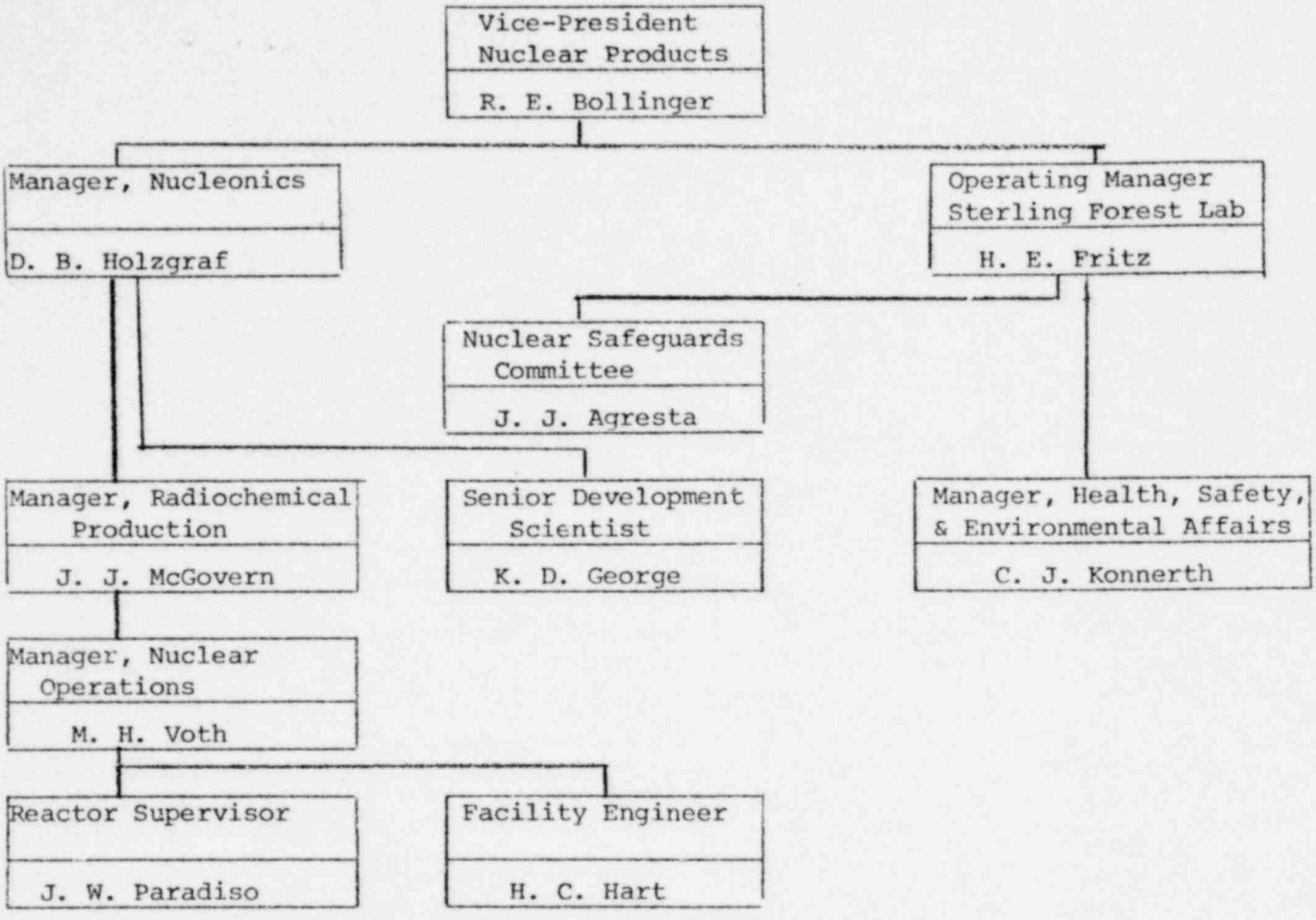
2. Procedures were revised to establish criteria for control rod calibration and calibration checks.

3. Reactor Operating Procedures were revised to establish a minimum reactivity insertion for those sample changes which require the reactor to be sub-critical.

4. The procedure for bottle changing and the production log sheet for Xe-124 irradiations were revised.

C. ORGANIZATIONAL CHANGES

The following is the Union Carbide Corporation Reactor Administration Organization:



D. SUMMARY OF UNSCHEDULED SHUTDOWNS

Unscheduled shutdowns were classified as follows:

Commercial Power Outages	18
Magnet Failure	4
False Log-N Period	8
Dropped Rod	5
Sample Movement By Operator	6
Manual Safety Shutdown	1
Spot On Core	1
Low Pool Level	1
Loss of Area Radiation Monitors	1
Loss of H.P. Air	1

In each case a determination of the cause of the shutdown was made and the prescribed corrective action taken.

Efforts continue to reduce the number of unscheduled shutdowns within our control by preventative maintenance and equipment replacement.

E. POWER GENERATED

Total power generated for 1978 was 40,346 megawatt hours. The reactor operated on a seven (7) day a week schedule with refueling and maintenance shutdowns about once every two (2) weeks.

F. ROUTINE TESTS CONDUCTED

All required routine tests have been performed as scheduled.

G. FUEL ELEMENT TRANSFERS

Twelve (12) fuel elements from the Ames (Iowa) reactor were received and modified for use in UCNR. Sixteen (16) fuel elements with the new aluminide ($U\text{-}Al_x$) fuel matrix manufactured by CERCA (France) were received and are being used.