Dun-61

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

Cover Sheet for a Hanford Historical Document Released for Public Availability

Released 1994

**Prepared for the U.S. Department of Energy
under Contract DE-AC06-76RLO 1830**

**Pacific Northwest Laboratory
Operated for the U.S. Department of Energy
by Battelle Memorial Institute**

MASTER

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

DT

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

DECLASSIFIED

DOCUMENT NO.

HANFORD CODE C-65

SERIES AND COPY NO.

DATE _____

November 1, 1965

RESTRICTED DATA
THIS DOCUMENT CONTAINS RESTRICTED DATA AS
DEFINED IN THE ATOMIC ENERGY ACT OF 1954.
TRANSMITTAL OR THE DISCLOSURE OF ITS
CONTENTS IN ANY MANNER BY AN UNAUTHORIZED
PERSON IS PROHIBITED.

TITLE

REACTOR OPERATIONS DAILY REPORT
FORM BM-5000-126.1 (10-65)

☐ OTHER OFFICIAL CLASSIFIED INFORMATION
THIS MATERIAL CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE LAWS, TITLE 18, U. S. C., SECS. 793 AND 794, THE TRANSMISSION OR REVELATION OF WHICH IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW.

AUTHOR

D. L. DeNeal

ISSUING FILE
NORTHWEST
RECEIVED
NOV 15 1955
CIRCULATING
COPY

THIS DOCUMENT MUST NOT BE LEFT UNATTENDED OR WHERE AN AUTHORIZED PERSON MAY HAVE ACCESS TO IT. WHEN NOT IN USE, IT MUST BE STORED IN AN SECURELY LOCKED REPOSITORY WITHIN A SECURED AND GUARDED AREA. IF IT IS YOUR POSSESSION, UNTIL YOU HAVE OBTAINED A SIGNED ORDER FROM CLASSIFICATION, IT IS YOUR RESPONSIBILITY TO KEEP IT AND ITS CONTENTS WITHIN THE LIMITS OF THE SUBJECT AND FROM ANY UNAUTHORIZED PERSON. ITS TRANSMITTAL TO, AND STORAGE AT YOUR PLACE OF RESIDENCE IS PROHIBITED. IT IS NOT TO BE DUPLICATED. IF ADDITIONAL COPIES ARE REQUIRED, OBTAIN THEM FROM THE RECORD ISSUING FILE. ALL PERSONS RECEIVING THIS DOCUMENT ARE REQUESTED TO SIGN IN THE SPACE PROVIDED BELOW.

[illegible]

MASTER

DECLASSIFIED

(CLASSIFICATION)

DECLASSIFIED

HANFORD CODE C-65
DUN-61

This document is classified

by J.P. Twit.

~~This document consists of
6 pages. No. 1 of
40 copies. Series A.~~

DISTRIBUTION:

1. OC Schroeder	13. MT Binns	25. DE Clark
2. RS Bell	14. RE Anderson	26. PA Carlson
3. AR Maguire	15. RW Hooper	27. CG Lewis
4. CN Gross	16. G Fiorelli	28. LJ Newell
5. RE Dunn	17. JR Pierce	29. JR Young
6. AP Vinther	18. RK Wahlen	30. GL Gurwell - GE-HAPO
7. SM Graves	19. LC Lessor	31. DL DeNeal
8. JW Baker	20. RJ Pyzel	32. RB Hall - Battelle-NW
9. EJ Filip	21. T Prudich	33. RL Plum - RLOO-AEC
10. JT Baker	22. RW Bown	34.-38. Extra
11. RG Clough	23. HG Spencer	39. DUN Files
12. RV Myers	24. RW Reid	40. Record Center

Classification Cancelled and Changed To

DECLASSIFIED

November 1, 1965

By Authority of R.M. Otten

CG-NMP-1 8-4-94

By J.E. Savely 9-22-94

Verified By Jerrin Maley 9-22-94

REACTOR OPERATIONS DAILY REPORT
FORM EM-5000-126.1 (10-65)

Effective November 1, 1965, the Reactor Operations Daily Report, issued from the Production Reports and Statistics Office, will be revised as shown on page 2. The same form will be used by each of the Plants for sending report information to Production Reports and Statistics each morning.

The instructions shown on the following pages will serve as a guide for those preparing the report and will further explain the limited definition on the daily report form to those receiving the report.

J. L. DeNeal

Production Reports & Statistics
Production Sub-Section
Manufacturing Section
Douglas United Nuclear, Inc.

DL DeNeal:bkm

~~This document contains data as defined in the
Energy Act of 1954. Its release or its
copying in any manner to an unauthorized person is prohibited.~~

DECLASSIFIED

AFTER FILL-IN

REACTOR OPERATIONS DAILY REPORT

DATE

	B	C	D	KE	KW	SMALL	K'S	TOTAL
1. POWER LEVEL AT 0800 FOLLOWING DAY - MW								
2. MAX. POWER LEVEL - MW								
3. INPUT PRODUCTION - MWD								
4. INPUT PRODUCTION VARIANCE FROM FORE- CAST-M-T-D-KMWD								
5. INPUT PRODUCTION FORECAST FOR MO.-KMWD								
6. OUTAGE HOURS								
7. TIME OPER. EFF. M-T-D								
8. TIME OPER. EFF. FORECAST FOR MO.								
9. REACTOR INLET WATER TEMPERATURE AT 2330- C						TIME OPER. EFFICIENCY-30 DAY AVERAGE		
10. BULK OUTLET WATER TEMPERATURE AT 2330- C						COMBINED REACTORS - MONTH TO DATE		
11. REACTOR WATER FLOW RATE AT 2330- GPM÷1000						REACTOR OUTAGES		RUPTURES
12. FACTOR LIMITING POWER LEVEL						SCHEDULED		NAT. ENR.
13. DAILY WATER COLLECTION - GALS.						COMPLETED	REMAINING	
14. ESTIMATED DATE STARTUP TIME HOUR						WATER - LEAK		
						SCRAMS	OTHERS	TUBE VAN STONE
						DAILY PEAK ELECT. DEMAND MEGAWATTS -		

DECLASSIFIED

Instructions for the Preparation of the Reactor Operations Daily Report
(Form BM-5000-126.1 - 10-65)

The report period is from midnight to midnight unless otherwise specified. The 24-hour clock is used for showing time. Data for the last three columns (Small, Ks and Total) and the combined reactor month-to-date performance table will be tabulated by Production Reports and Statistics, except for the last item "Daily Peak Electrical Demand - Megawatts" which is reported by K Area.

Line

- 1 - Power level in megawatts at 0800 hours on the day following the report period. If the reactor is down show as "0".
- 2 - Maximum power level (shown as total heat) achieved during the day, in megawatts. If the level is held for 24 hours and exceeds the previously established maximum level, mention under "Remarks" that a new maximum power level record was established.
- 3 - Input production (shown as total heat) in megawatt days. If production for the day exceeds the maximum previously achieved, mention under "Remarks" that a new daily production record was achieved.
- 4 - KMWDs, shown as a plus or minus number, indicating the variance between month-to-date input production and the month-to-date forecast. The month-to-date forecast is calculated by dividing the monthly forecast by the number of days in the month. Adjustment is made when an extended outage occurs at the K Reactors.
- 5 - Represents the official input production forecast for the month and will remain unchanged during each month.
- 6 - Total outage hours (midnight to midnight), shown to the nearest 0.1 hour and measured from the time the rods are scrambled until first indication at start-up. Total outage time for the day should represent the summation of each individual outage after it has been calculated to the nearest 0.1 hour.
- 7 - The percent of time for the month-to-date that the reactors operated.
- 8 - The official time operated efficiency forecast for the month and will remain unchanged during each month.
- 9 - Reactor inlet water temperature in degrees centigrade at 2330 hours.
- 10 - Reactor bulk outlet water temperature in degrees centigrade at 2330 hours.

DECLASSIFIED

- 11 - Water flow rate through the reactor in GPM divided by 1000 at 2330 hours.
- 12 - Factor limiting power level. Use one of the following abbreviations if appropriate; otherwise explain under "Remarks".

TAI - Trip-after-instability.

BO - Bulk outlet water temperature.

NE - Nonequilibrium.

EAL - External administrative limit (currently applies to the AEC administrative limits at the K Reactors).

IAL - Internal administrative limit. If this designation is reported, explain what the limit is and why it is being used.

TP - Tube power. Show the numerical value of the tube power limit and explain why tube power is limiting; e.g., rupture control, tube corrosion, etc.

G - Graphite temperature limit when further increases in helium concentration will not reduce the graphite temperature.

- 13 - Water collection, in gallons. Report a numerical quantity only when the daily collection is above 10 gallons. Otherwise show as "N" indicating a normal collection.

- 14 - Estimated start-up time (date and hour) if the reactor is down. Revised estimates should be shown as the outage proceeds if appropriate. For extended outages of a week or more, show only estimated start-up date at the time of shutdown. About two days prior to the end of the outage also show the estimated hour of start-up.

Data for the last three columns (Small, Ks and Total) will be supplied by Production Reports and Statistics. The numbers in lines 1 through 8 represent the total for those lines on the report.

The numbers shown in the "Time Operated Efficiency - 30-Day Average" space represents the percent of time the reactors operated during the preceding 30 days.

The information in the "Combined Reactor - Month-to-Date" block is as follows:

DECLASSIFIED

Reactor Outages

Scheduled

Completed: Represents the number of scheduled outages completed during the month-to-date. In this tabulation, scheduled outage work may be completed during outages initiated by scrams, ruptures, leaks, etc.

Remaining: Represents the number of scheduled outages to be completed during the remainder of the month.

Scrams: Represents the number of scrams, excluding those due to water leak and fuel element failures, month-to-date.

Other: This includes shutdowns from causes other than scrams and scheduled outages.

Ruptures: The number of failed fuel elements removed from the reactors, natural or enriched metal, month-to-date.

Water-Leak: The number of water leaks corrected, tube (including those caused by a rupture) or Van Stone, month-to-date.

Daily Peak Electrical Demand: Represents the daily peak electrical demand in megawatts, excluding K Area generation. (Reported from 165-K.)

Remarks:

The following represents the type of information that should be reported under "Remarks":

- 1 - Show the time of each shutdown or scram (time rods are scrambled), and the time of each start-up (first indication).
- 2 - Completely explain the cause of each outage. For scrams, indicate which instrument tripped the safety circuit and what caused the instrument to function.
- 3 - Indicate the major work completed during each outage.
- 4 - When fuel element failures are discharged, indicate the tube number, type of metal, how it was removed and production test number, if appropriate.
- 5 - If project work is done, show the project number and briefly describe the work completed.
- 6 - Indicate the total number of tubes replaced regardless of whether on a tube replacement program or as individual tubes (such as those due to ruptures and water leaks).

- 7 - List all water leaks by tube number and indicate the type of leak: tube, Van Stone, gasket, etc.
- 8 - Mention new daily power level and production records as they are achieved.

DECLASSIFIED