

PROCEDURE

HNP-8101
PROCEDURE NUMBER

Lab
RESPONSIBLE SECTION

NON-SAFETY RELATED ()

[illegible]

8404020177 840120
PDR ADOCK 05000321
F PDR

manus | sup-3

WE 12/20
PROCEDURE REVISION REQUEST

PROCEDURE NO. HNP- 8101

SHEET 1 OF 2

Revision No. 6

| REQUESTED BY | | DEPARTMENT HEAD APPROVAL | |
|-----------------------|-----------------|--------------------------|----------------|
| Name: <u>MRW</u> | Date: | Signature: | Date: |
| <u>David Bartlett</u> | <u>11-28-83</u> | <u>RW Zawadzki</u> | <u>12/8/83</u> |

REVISION CHANGES MODE OF OPERATION OR INTENT AS DESCRIBED IN FSAR:
() Yes (☒) No

CHANGE INVOLVES:

() An unreviewed Safety Question () Tech. Specs. (☒) Neither
(See back for Safety Evaluation if required).

PRESENT STATUS: Safety Related (☒) Non-Safety Related ()

The above Safety/Non-Safety Status has changed () Yes to _____

Attach marked up copy of procedure to this form.

REASON FOR REQUEST: To add description and calibration
of a new model

DESCRIPTION OF CHANGES: Pg 1 A add and 6112D, Pg 1
Reverse par B & C, Par E add section 2, Par F
Remove section 1 and section 2, Pg 2 par
G.1 add (6112B), on LCD, Pg 4 add par H.1
and reletter a through cc. Pg 4 Par H.1.5 change

PRB RECOMMENDS APPROVAL: (☒) Yes () No

JOCK
PRB Secretary

88-237

PRB Number

2-2-83

Date

HNP-9

MARK B

PROCEDURE REVISION REQUEST

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PROCEDURE NO. HNP-8101
REVISION NO. 6

REASON FOR REQUEST: Sec pg 1

DESCRIPTION OF CHANGES: 15 to 50 and 200 to 500
Pg 4 bottom delete note, Pg 5 Para E.1X change
200 to 500, Para E.1 add section 2, Add Pgs 6 & 7
Para E.2, Delete old data pkg 1 pg 6 and add
new data pkg 1 pg 9, Add data pkg 2 and
cover sheet

HNP-9

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SAFETY EVALUATION

The revision of this procedure does not constitute an unreviewed safety question as explained below:

1. The probability of occurrence and the consequences of an accident or malfunction of equipment important to the safety are not increased above those analyzed in the FSAR due to these changes because the revision does not change the purpose or performance of the system:--


2. The possibility of an accident or malfunction of a different type than analyzed in the FSAR does not result from this change because the system responds and is operated as before the change.

3. The margin of safety as defined in the Technical Specifications is not reduced due to this revision because the revision does not change any limited safety system setting which would allow a safety limit to be exceeded or to allow a limiting condition for operation to be exceeded as stated in Technical Specifications

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Georgia Power TELETECTOR MODEL 6112B/D OPERATION AND CALIBRATIONA. PURPOSE

To establish standard operation guides and calibration technique of the Teletector Model 6112B and 6112D.

B. REFERENCE

1. Teletector Model 6112 Technical Manual. TDC-0541M
2. Gamma Calibrator Procedure HNP-8115.

C. SAFETY

Observe radiation protection procedures.

D. TEST EQUIPMENT

1. Gamma calibrator.
2. Beta source.

E. DESCRIPTION OF INSTRUMENT

1. The teletector Model 6112B is a portable battery operated instrument for measuring gamma radiation, for detecting beta radiation and for tracing radioactive materials or contaminations. The fully transistorized printed circuit is contained in a waterproof case. Four 1.5 V batteries in the handle of the instrument serve as the power supply. The teletector 6112B, has a wide measuring range from 0.1 mR/hr to 1000 R/hr in five switch controlled scales, simple operation by a single switch for all functions, and a self contained telescopic probe extendable to a maximum length of 13 feet.
2. The model 6112D is the digital equivalent of the model 6112B with the exception of an integration function and time constant feature added in.

F. DESCRIPTION OF CONTROLS

1. Model 6112B

a. External controls.

Switch Turns instrument OFF, B (Battery check), 1000 R/hr, 50 R/hr, 2 R/hr, 50 mR/hr, or 2 mR/hr.


b. Internal controls.

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- | | | | |
|-----|--------------------------|------------------------------|--|
| (1) | P1 potentiometer | Adjusts high voltage current | |
| (2) | P2 and P7 potentiometers | Calibrate 0-1000 R/hr range | |
| (3) | P3 potentiometer | Calibrates 0-2 R/hr range | |
| (4) | P4 potentiometer | Calibrates 0-50 mR/hr range | |
| (5) | P5 potentiometer | Calibrates 0-2 mR/hr range | |
| (6) | P6 potentiometer | Calibrates 0-50 R/hr range | |

2. Model 6112D

a. External Controls

- (1) Function Switch; turns instrument off, B (Battery Check), R/hr, mR/hr and mR (integrate).
- (2) Time constant switch; adjusts response time on the mR/hr scale in 1, 4, and 16 second intervals.

NOTE

The time constant switch is operational in the mR/hr range only. The R/hr range is automatically set at 1 second.


b. Internal Controls

- | | | |
|-----|------------------|---|
| (1) | P1 potentiometer | Adjusts high voltage current. |
| (2) | P2 potentiometer | Adjusts the upper range at the R/hr scale. |
| (3) | P3 potentiometer | Adjusts the lower range of the mR/hr scale. |
| (4) | P4 potentiometer | Adjusts the battery voltage indicated on the LCD. |
| (5) | P5 potentiometer | Adjusts the lower range of the R/hr scale. |
| (6) | P6 potentiometer | Adjusts the lower mid range of the R/hr scale. |
| (7) | P7 potentiometer | Adjusts the upper range of the mR/hr scale. |

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(8) P8 potentiometer

Adjusts the time base oscillator.

(9) P9 potentiometer

Adjusts the upper mid range of the R/hr scale.

G. OPERATION OF INSTRUMENT

1. Turn switch to B. Check meter to see if indicator is within black area on the scale (6112B), or LCD indication is greater than 4 volts (6112D). If not, tag the instrument out using a TO SHOP tag stating the reason(s) it was tagged out.

2. Dose rate measurement

- a. To carry out dose rate measurement, place the main switch into one of the five measuring ranges. Select the measuring range in accordance with the dose rate present.
- b. If full scale deflection is obtained as you approach a source of radiation, switch over to a less sensitive range.

3. Detection of Beta Radiation

Detection of beta radiation becomes possible after removal of the cap from the beta window. First, read dose rate with cap in position. If deflection increases after removal of the cap, beta radiation is present. The increase in deflection provides no information about the additional dose rate of beta radiation. If beta radiation is detected with a teletector obtain a RO-2A or RO-3A to determine Beta dose rate.

4. Use of telescopic probe

First extend the telescopic probe to the desired length. If sources of (presumed) high activity are to be traced, extend the probe to its maximum length where possible.

CAUTION

The telescopic probe must be extended and retracted slowly. Also avoid rotation of the probe. This prevents damage to the cable inside the probe.

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5. Use of the earphone.

If only a small deflection of the pointer is obtained in the least sensitive range (2 mR/hr) it is advised to connect the earphone to the earphone connection. This produces the G.M. tube impulses in the form of clicking sounds. At higher dose rates the clicking sound becomes a hissing noise so that the deflection of the meter must be used for orientation.

H. CALIBRATION OF INSTRUMENT

1. Model 6112B

CAUTION

Do not touch electrical components with the hands as damage to the instrument may result.

- a. Check batteries by placing the switch to B. The meter should read in the black area, if not, replace batteries and repeat this step.
- b. Turn switch to 2 mR/hr.
- c. Place probe in about a 0.5 mR/hr and 1.5 mR/hr gamma field respectively and check the readings. Record the readings on the Instrument Calibration Data Sheet in the As Found column.
- d. Turn switch to 50 mR/hr.
- e. Repeat step H.1.c. for about 10 mR/hr and 35 mR/hr field respectively.
- f. Turn switch to 2 R/hr.
- g. Repeat step H.1.c. for about a 0.5 R/hr and 1.5 R/hr field respectively.
- h. Turn switch to 50 R/hr.
- i. Repeat step H.1.c. for about a 10 R/hr and 35 R/hr field respectively.
- j. Turn switch to 1000 R/hr.
- k. Repeat step H.1.c. for a 50 R/hr and 500 R/hr field respectively.

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- l. If the instrument reads within $\pm 20\%$ of the actual dose rates in steps H.1.c. thru H.1.k., proceed to step H.1.aa.
- m. If the instrument does not read within $\pm 20\%$ of the actual dose rates in each field continue with step H.1.n.
- n. Turn switch to 2 mR/hr.
- o. Place probe in about a 1.5 mR/hr field and adjust potentiometer P5 until instrument reading equals the actual dose rate $\pm 20\%$.
- p. Turn switch to 50 mR/hr.
- q. Repeat step H.1.o. for about a 35 mR/hr field and using potentiometer P4.
- r. Turn switch to 2 R/hr.
- s. Repeat step H.1.o. for about a 1.5 R/hr field and using potentiometer P3.
- t. Turn switch to 50 R/hr.
- u. Repeat step H.1.o. for about a 35 R/hr field and using potentiometer P6.
- v. Turn switch to 1000 R/hr.
- w. Repeat step H.1.o. for about a 50 R/hr field and using potentiometer P2.
- x. Repeat step H.1.o. for about a 500 R/hr field and using potentiometer P7.
- y. Repeat steps H.1.w. and H.1.x. alternately until instrument reads $\pm 20\%$ at both dose rates.
- z. Go to step H.1.b. and repeat the step through H.1.l. recording the results in the As Left column.


NOTE

Even though the instrument is $\pm 20\%$ of calibration points every effort should be made to make it read as close as possible to the calibration points.

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- aa. If the instrument checks out properly, complete instrument Calibration Data Sheet turn switch OFF, replace the calibration data sticker with a new one bearing this test date on it and when the instrument is due for its next routine quarterly calibration.
 - bb. If the instrument cannot be calibrated initiate repairs.
 - cc. Repeat Section H.1. when instrument is repaired.
2. Model 6112D
- a. Turn function switch to B and make sure the battery voltage is over 4 volts. If less than 4 volts, replace batteries before calibration.
 - b. Turn the function switch to the R/hr position.
 - c. Place the instrument in the following fields 10 R/hr, 150 R/hr, 200 R/hr, and 750 R/hr. Note the readings on Data Sheet 2. If the readings are within $\pm 10\%$ of the required reading go to step H.2.j., if not continue.
 - d. Set P9 on its right mechanical stop.
 - e. Place instrument in a 10 R/hr field and adjust P5 until 10 R/hr is indicated.
 - f. Place instrument in a 150 R/hr field and adjust P6 until 150 R/hr is indicated.
 - g. Place instrument in a 750 R/hr field and adjust P2 until 750 R/hr is indicated.
 - h. Place instrument in a 200 R/hr field and adjust P9 until 200 R/hr is indicated.
 - i. Indicate on Data Sheet 2 all readings As Left and which pots were adjusted if any.
 - j. Switch the function switch to the mR/hr range.
 - k. Place the instrument in the following fields 10 mR/hr and 750 mR/hr. Note the readings on Data Sheet 2. If the readings are within $\pm 10\%$ of the required value go to step H.2.n., if not continue.
 - l. Place the instrument in a 10 mR/hr field and adjust P3 until 10 mR/hr is indicated.

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- m. Place the instrument in a 750 mR/hr field and adjust P7 until 750 mR/hr is indicated.
- n. Indicate on Data Sheet 2 all readings As Left and which pots were adjusted if any.
- o. Switch the function switch to mR and place the instrument in a 10 R/hr field for 36 seconds. The instrument should indicate $100 \text{ mR} \pm 10 \text{ mR}$. Record the results on Data Sheet 2.
- p. If the instrument checks out properly complete the calibration Data Sheet 2. Replace the calibration sticker with a new one bearing the next quarterly calibration due date.
- q. If the instrument will not check out properly and falls out of tolerance repairs must be initiated.


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E. I. Hatch Nuclear Plant

Georgia Power 

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PROCEDURE DATA PACKAGE

DOCUMENT NO: HNP-8101-1

SERIAL NO: R07-

MPL NO: _____

RTYPE: G15.14

XREF: _____

TOTAL SHEETS: 2

FREQUENCY: Quarterly

COMPLETED BY: _____

DATE COMPLETED: _____

I HAVE REVIEWED THIS DATA PACKAGE FOR COMPLETENESS
AND AGAINST ACCEPTANCE CRITERIA IN ACCORDANCE WITH HNP-830.

ACCEPTABLE _____

UNACCEPTABLE _____

REVIEWED BY: _____

DATE REVIEWED: _____

REMARKS: _____

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FIGURE 1

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Georgia Power 

DATA PACKAGE 1
TELETECTOR MODEL 6112B
CALIBRATION DATA SHEET

Serial No. _____ MPL No. _____

Location _____

INSTRUMENT READINGS

| CALIBRATION SOURCES | ACTUAL EXPOSURE RATE | AS FOUND | AS LEFT |
|---------------------|----------------------|----------|---------|
| | 0.5 mR/hr | mR/hr | mR/hr |
| | 1.5 mR/hr | mR/hr | mR/hr |
| | 10 mR/hr | mR/hr | mR/hr |
| | 35 mR/hr | mR/hr | mR/hr |
| | 0.5 R/hr | R/hr | R/hr |
| | 1.5 R/hr | R/hr | R/hr |
| | 10 R/hr | R/hr | R/hr |
| | 35 R/hr | R/hr | R/hr |
| | 50 R/hr | R/hr | R/hr |
| | 500 R/hr | R/hr | R/hr |

Maintenance _____

Remarks _____

Next cal due date _____

Cal by _____ Date _____


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PROCEDURE DATA PACKAGE

DOCUMENT NO: HNP-8101-2

SERIAL NO: R07-

MPL NO: _____

RTYPE: G15.14

XREF: _____

TOTAL SHEETS: 2

FREQUENCY: Quarterly

COMPLETED BY: _____

DATE COMPLETED: _____

I HAVE REVIEWED THIS DATA PACKAGE FOR COMPLETENESS
AND AGAINST ACCEPTANCE CRITERIA IN ACCORDANCE WITH HNP-830.

ACCEPTABLE _____

UNACCEPTABLE _____

REVIEWED BY: _____

DATE REVIEWED: _____

REMARKS: _____

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FIGURE 2
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DATA PACKAGE 2
TELETECTOR MODEL 61120
CALIBRATION DATA SHEET

Serial No. _____ MPL No. _____

Location _____

INSTRUMENT READINGS

| CALIBRATION SOURCES | ACTUAL EXPOSURE RATE | AS FOUND | AS LEFT |
|---------------------------------|----------------------|----------|---------|
| | 10 mR/hr | | |
| | 750 mR/hr | | |
| | 10 R/hr | | |
| | 150 R/hr | | |
| | 200 R/hr | | |
| | 750 R/hr | | |
| 10 R/hr for 36 seconds = 100 mr | | | |

Maintenance _____

Remarks _____

Next cal due date _____

Cal by _____ Date _____



UNITED STATES
NUCLEAR REGULATORY COMMISSION

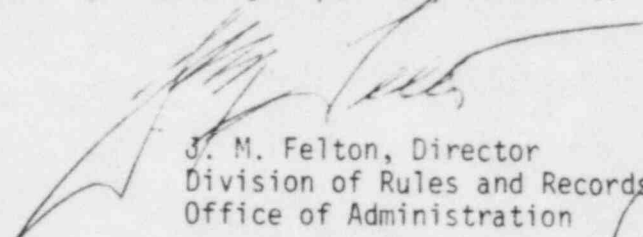
WASHINGTON, D. C. 20555

March 22, 1984

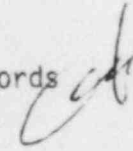
50-321/366 Hatch

MEMORANDUM FOR: Chief, Document Management Branch, TIDC
FROM: Director, Division of Rules and Records, ADM
SUBJECT: REVIEW OF UTIL EMERGENCY PLAN DOCUMENTATION

The Division of Rules and Records has reviewed the attached document and has determined that it may now be made publicly available.

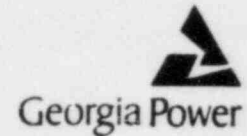


J. M. Felton, Director
Division of Rules and Records
Office of Administration



Attachment: As stated

Georgia Power Company
Post Office Box 439
Baxley, Georgia 31513
Telephone 912 367-7781
912 537-9444



Edwin I. Hatch Nuclear Plant

January 26, 1984
DCS-84-8

PLANT E. I. HATCH
Emergency Implementing Procedures

Docket Nos. 50-321/50-366

United States Nuclear Regulatory Commission
Director of Nuclear Reactor Regulation
Washington, DC 20555

Gentlemen:

Pursuant to Appendix E, Section V of 10 CFR 50, please find enclosed ten (10) copies of the latest revisions to the Plant E. I. Hatch Emergency Procedures. Three (3) copies of these procedures are also being forwarded to the Region II office in Atlanta, Georgia.


E. C. Sorrell
Document Control Supervisor

ECS/car

xc: U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region II
Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

file

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~~CP AD-OR 06030021~~
~~CP~~

DOCUMENT TRANSMITTAL

TRANSMITTAL NO: PCQ84-62

DATE: 1-25-84

TRANSMITTED TO: Mr. J. McC. Cantor - 1000 15th St. N.W.

DESCRIPTION OF DOCUMENT(S) TRANSMITTED:

HNP-8101 Rev 7

RECEIVED BY _____ DATE: _____

RETURN THIS TRANSMITTAL AND ANY DOCUMENTS REQUIRED TO BE
RETURNED, TO THE DOCUMENT CONTROL DEPARTMENT.

DESCRIPTION OF DOCUMENT(S) TO BE RETURNED:

HNP8101 Rev 6

DATE RETURN REQUIRED 2-29-84

E. C. Jones / CAC
DOCUMENT CONTROL SUPERVISOR

HNP-0-ADM-00010 R13

150001 set

Ful-Vu Pul-Proof Products: KF-3-11 Lightweight

4 Prot clear N1 3-11 1/2 1/2 1/2 1/2