

SOUTH CAROLINA ELECTRIC AND GAS COMPANY

VIRGIL C. SUMMER NUCLEAR STATION

START-UP

PHASE I INSTRUCTION

FOR INFORMATION ONLY

FOR INFORMATION ONLY

OFFICIAL TEST COPY

DG-A CRANKCASE VACUUM LEAK TEST

DG-10-H-1

REVISION 0

September 12, 1979

SAFETY-RELATED (X)

WRITTEN BY:

Lon L. Earl

LON L. EARL

DATE

9/13/79

APPROVED BY:

C. W. B. [Signature]

LEAD SYSTEMS SUPERVISOR

DATE

9-17-79

TEST DATA

APPROVED BY:

C. W. B. [Signature]

LEAD SYSTEMS SUPERVISOR

DATE

10-24-80

105050310

SUM-C  
339-1

REV. 0

C-96 (Rev. 2)



LIST OF EFFECTIVE PAGES

PAGE

REVISION

1	0
i	0
ii	0
2	0
3	0
4	0
5	0
6	0
7	0

REVISION   APPROVED DATE

REV. 0   9/17/79

SUM-C  
339-11

REV. 0

## I N D E X

- 1.0 PURPOSE
- 2.0 REFERENCES
- 3.0 PREREQUISITES
- 4.0 SPECIAL TEST EQUIPMENT

### ATTACHMENTS

ATTACHMENT I

HYDROTEST PRESSURE DATA SHEET

SUM-C  
339-2

C-99 (Rev. 2)

REV. 0

1.0 PURPOSE

- 1.1 To verify integrity of oil separator and oil return piping of the crankcase vacuum system.

2.0 REFERENCES

- 2.1 D-302-353, Rev. 1, GAI Drawing, Diesel Generator Miscellaneous Services.
- 2.2 LMS-32-005-7-8, Colt Industries drawing, Crankcase Vacuum, Air Intake and Exhaust System.

3.0 PREREQUISITES

INITIAL/DATE

- 3.1 Turnover of diesel generator from construction to Start-Up has been completed.

PWB 110-4-80

- 3.2 Air supply available to Diesel Generator Building.

CWB 110-4-80

- 3.3 Pipe fittings and two (2), five (5) inch pipe plugs available for connection of air supply to system.

CWB 110-4-80

- 3.4 Demineralized water supply available to the Diesel Generator Building.

CWB 110-4-80

4.0 SPECIAL TEST EQUIPMENT

- 4.1 Close the oil separator to engine sump drain valve.

CWB 110-4-80

- 4.2 Close the oil separator to engine crankcase vacuum isolation valve.

CWB 110-4-80

SUM-C  
339-3

REV. 0

INITIAL/DATE

- 4.3 Remove the flax connection between oil separator and vacuum pump suction.

CWB / 10-4-80

- 4.4 Remove the flex connection between the oil separator and vacuum pump suction.

CWB / 10-4-80

- 4.5 Remove the flex connection between the oil separator and the vacuum suction line.

CWB / 10-4-80

- 4.6 Remove the flex connection from the oil separator drain line isolation and cap the end of the flex hose.

CWB / 10-4-80

- 4.7 Add water to the oil separator until the oil drain line is filled.

CWB / 10-4-80

- 4.8 While system is under static pressure, visually inspect oil drain piping for leaks.

1102 / 10-4-80

- 4.9 Return system to normal:

- 4.9.1 Air blow water from drain line and oil separator.

LEE / 10-6-80

- 4.9.2 Install flex hose at each end of the oil separator.

LEE / 10-6-80

- 4.9.3 Install flex hose at the oil separator drain line isolation valve.

LEE / 10-6-80

SUM-C  
339-4

REV. 0

INITIAL/DATE

- 4.9.4 Open the oil separator drain line isolation valve.

LLE / 10-6-80

- 4.9.5 Open oil separator to engine crankcase vacuum isolation valve.

LLE / 10-6-80

- 4.10 Attach a copy of the official "Hydrotest Pressure Data Sheet" to the official test procedure.

LLE / 10-23-80

- 4.11 Attach a marked-up system drawing (D-302-351) to this procedure, showing the piping that was actually leak tested.

LLE / 11-24-80

SUM-C  
339-5

REV. 0



HYDROTEST PRESSURE DATA SHEET

ATTACHMENT 1  
Sheet 1 of 1

SYSTEM NUMBER: DG-10-H-1

DRAWING: D-302-353

1. SYSTEM HYDRO BOUNDARIES:

Oil separator, oil separator drain line to sump isolation valve.

2. INSPECTION BOUNDARIES:

Oil separator drain line between oil separator and drain line flex hose at the drain line isolation valve.

3. System Hydrotest pressure is Static psig. The system

hydrostatic test pressure and tolerance is at the system highpoint. Higher pressures due to elevation differences in the system are acceptable as long as the test pressure at the system highpoint is maintained within the above tolerance.

4. Minimum hydrotest temperature is 60 °F (from DSP-544F-044461-000)

SUM-C  
285-6

REV. 0



System Number: DG-10-H-1

ATTACHMENT 1  
Sheet 2 of 2

5. Justification for the hydrotest pressure is as follows:

- a) All valves within the system hydro boundaries above are 150 pound pressure class or higher. The minimum ASME code required test pressure that these valves are tested to is 275 psig.
- b) The maximum permissible pressure for the piping within the system hydro boundaries is 425 psig.

Prepared by:

R. L. Fiedler

R. L. Fiedler

Approved by:

E. J. Anselmi

Date:

7-19-79

Date Submitted to GAI:

SUM-C  
285-7

REV. 0

June 18, 1979

(11e)

# WATER ANALYSIS/CERTIFICATION FORM

ATTACHMENT 4

Page 1 of 1

Rev. 2

## Section I

Tank/System Sampled: DEMINERALIZED WATER STORAGE TANK.

Certified to Grade A Serial No. 80-10-03

Date/Time of Sample 10/3/90 @ 0930

Date/Time Certification Expires 10/7/90 @ 0930

Remarks/Other Data Procedure DP-1A-41

## Section II

ANALYSIS	LIMITS	RESULTS
pH	6.0 - 8.0	7.5
Conductivity	2.0 umhos/cm.	0.92
Chloride	0.1 ppm	< 0.024 ppm
Fluoride	(Total)	< 0.010
Oxygen	0.10 ppm	—
Silica	0.10 ppm	< 0.005
Potassium	0.01 ppm	< 0.005
Sodium	0.01 ppm	< 0.005
Aluminum	0.02 ppm	< 0.005
Calcium	0.02 ppm	< 0.005
Magnesium	0.02 ppm	< 0.005
Suspended Solids	0.1 ppm	< 0.010
Total Solids	0.5 ppm	< 0.10

D. WIDNER  
ANALYST

10-3-90  
DATE

CHEMISTRY SUPERVISOR  
OR ASST. CHEM. SUPERVISOR