

05-110-90

1A DIESEL GENERATOR

REFERENCE MATERIAL

9202210327 920116
PDR ADOCK 05000424
S PDR

1A DIESEL GENERATOR
TRIP SENSORS

LOW PRESSURE LUBE OIL (MODEL F-573-156)	1PSL-4749A,B,C
LOW PRESSURE TURB OIL (MODEL F-573-156)	1PSL-4749D,E
LOW PRESSURE JACKET WATER (MODEL F-573-156)	1PSL-19114
HIGH PRESSURE CRANKCASE (MODEL F-573-359)	1PSH-4744
HIGH TEMPERATURE ENGINE BEARINGS (MODEL F-573-271)	1TSH-4747A-K (EXCLUDING "I")
HIGH TEMPERATURE JACKET WATER (MODEL F-573-330)	1TSH-19110,11,12
HIGH TEMPERATURE LUBE OIL (MODEL F-573-330)	1TSH-4748
HIGH VIBRATION, ENGINE (MODEL F-573-171)	1XS-4746A,B
HIGH VIBRATION, TURBO (MODEL F-573-171)	1XS-4745A,B
SENSOR, P3 (MODEL F-573-156)	1PSL-4902

FOR INFO
ONLY

INDEX

TAB. 1	WORK REQUEST PROGRAM	00350-C
TAB. 2	PREVENTATIVE MAINTENANCE	20015-C
TAB. 3	HOUSEKEEPING	20427-C
TAB. 4	PRESSURE SWITCH CAL.	22721-C
TAB. 5	TEMPERATURE SWITCH CAL.	22332-C
TAB. 6	GENERIC INST. CAL.	23820-C
TAB. 7	DIFF. PRESS. SW. CAL.	22336-C
TAB. 8	IN-PROCESS MATERIAL	00352-C
TAB. 9	REFERENCE MWD	19000439
TAB. 10	REFERENCE RER	88-0707
TAB. 11	REFERENCE RER	88-0821

**FOR INFO
ONLY**

Approval
W.F. Kitchens

Date
12/27/89

Vogtle Electric Generating Plant
NUCLEAR OPERATIONS

Unit COMMON



Georgia Power

Procedure No.
00350-C

Revision No.
19

Page No.
1 of 35

WORK REQUEST PROGRAM

7

1.0 PURPOSE

This procedure establishes administrative controls for maintenance activities at Vogtle Electric Generating Plant (VEGP). It provides for identification, control, and documentation of maintenance activities.

Procedure 29402-C, "WPG Work Request Processing" will be used in conjunction with this procedure to complete define the processing of a work order.

2.0 DEFINITIONS

2.1 WORK PLANNING GROUP (WPG)

A group of assigned individuals in the Planning, Scheduling and Work Control section of the Outages and Planning Department that plan, develop, prioritize, schedule, review, evaluate, and maintain history of repairs for Maintenance Work Orders (MWO).

2.2 PREVENTIVE MAINTENANCE (PM)

Work tasks performed on a predetermined schedule, in accordance with Procedure 20015-C, "Preventive Maintenance", to maintain equipment reliability.

2.3 PREDICTIVE MAINTENANCE (MP)

Work tasks performed on equipment or components to predetermine failures by obtaining and trending historical data through preventive maintenance, oil analysis, MOVATS, vibration monitoring corrective work orders, etc.

FOR INFO ONLY

2.4 PLANNED MAINTENANCE

Preventive maintenance, predictive maintenance and other work tasks performed on equipment components to prevent unexpected failure.

2.5 CORRECTIVE MAINTENANCE

Work tasks performed on systems or components to resolve items identified through preventive or predictive maintenance, surveillance, inspections and/or other methods.

2.6 WORK REQUEST TAG (WRT)

A three part tag used to identify deficiencies or work required on plant equipment or components, to properly flag equipment in the field and to allow Shift Supervisor (SS)/On-Shift Operations Supervisor (OSOS) notification of equipment problems.

2.7 WORK ORDER (WO)

When referenced in this procedure the step applies to an MWO and/or SWO.

2.8 MAINTENANCE WORK ORDER (MWO)

A site document used to perform and document maintenance on plant equipment or components, to ensure specific work controls are identified and the work history is maintained.

2.9 SUPPORT WORK ORDER (SWO)

A site document used to request support activities other than those activities encompassed in the maintenance work order program. Some examples of support activities are identified in Section 4.1.11.

2.10 SPECIAL INDICATORS

Indicators identified in NPMIS equipment file to flag special requirements for applicable components. Some examples are critical components (RXTRIP), Technical Specification (TSPEC), Local Leak Rate Test (LLRT), etc.

2.11 WALKDOWN SHEET

A computer generated form, attached to each MWO or SWO initiated, to identify certain requirements for MWO or SWO packaging. A planning tool to identify drawings, manuals, special requirements, etc.

2.12 EMERGENCY MAINTENANCE

Any immediate mandatory maintenance or repair activity that is necessary to maintain safe operation or shutdown capabilities.

2.13 URGENT MAINTENANCE

Maintenance that is not as critical as emergency maintenance but in the opinion of the On-Shift Operations Supervisor is critical to schedule or safety and should be performed during the next 24-hour period.

2.14 CALIBRATION

Work tasks performed to compare and adjust equipment and/or instruments to a predetermined reference value, within tolerances.

2.15 SURVEILLANCE

Testing performed on a periodic basis to verify and document that structures, systems, and components are functioning properly and should remain in a readiness state capable of fulfilling the intended safety-related function.

2.16 FUNCTIONAL TESTS

performance of those steps necessary to determine structures, systems and components function in accordance with predetermined specifications. Functional tests may include: Surveillance tests, ISI tests, ASME Section XI requirements and inspections in accordance with Procedure 29401-C, "Maintenance Work Order Functional Test".

VEGP

00350-C

19

4 of 35

2.17 INSPECTIONS

Examination, observation or measurement to determine the conformance of materials, supplies, components, parts, appurtenances, systems, personnel performance, procedures, processes or structures to predetermined requirements.

2.18 MAINTENANCE HISTORY

A written chronological record of work tasks performed on a component from initial turnover to present.

2.19 SUPERVISOR

A member of Georgia Power Supervision, foreman and above including a cognizant individual as defined in Procedure 00801-C, "Control Of Onsite Contractors".

2.20 CONTRACTOR MAINTENANCE

Maintenance performed on the plant by personnel selected according to Procedure 00801-C.

2.21 AUTHORIZED INSPECTOR

An employee of an Authorized Inspection Agency who has qualifications for, and has been properly qualified for ASME Section III Division 1 and ASME Section XI Preservice/Inservice Inspection.

2.22 SPECIAL REVIEW

A review by one of the following:

Plant Review Board
Fire Protection Engineer
Equipment Qualification Group
Technical Support
Authorized Inspector (AI)

2.21 FIRE PROTECTION PROGRAM COMPONENT

Those plant components required by VEGP FSAR 9.5.1 to be operational in order to maintain the viability of the Fire Protection Program.

2.22 CRITICAL COMPONENTS

Components which have been identified by reactor trip (RXTRIP) special indicator in NPMIS to trip the unit unless special care is taken. A system, control, protection scheme, or component which will cause a unit trip if it itself is inadvertently bumped, grounded, shorted, or misoperated, or if it fails in service.

3.0 RESPONSIBILITIES

3.1 MANAGER MAINTENANCE

The Manager Maintenance ensures that the Maintenance Program is effectively implemented as follows:

- 3.1.1 Policies, procedures, and administrative controls are established and updated as necessary.
- 3.1.2 Work tasks are documented and performed in accordance with approved procedures and safe work practices.
- 3.1.3 Installation of temporary jumpers and lifting wires in accordance with Procedures 00306-C, "Temporary Jumper And Lifted Wire Control" and 20429-C, "Short Term Documentation Of Temporary Jumpers And Lifted Wires".
- 3.1.4 Implementation of temporary modifications and hanging tags in accordance with Procedure 00307-C, "Temporary Modifications".
- 3.1.5 Disposition of parts/equipment removed from the plant is performed and documented.
- 3.1.6 Cleanliness requirements are established in accordance with Procedures 00254-C, "Plant Housekeeping/Material Condition Program" and 20427-C, "Maintenance Cleanliness And Housekeeping Control".

PROCEDURE NO	REVISION	PAGE NO
VEGP	00350-C	19
3.1.7	An On-the-Job Training (OJT) Program is developed and coordinated with the Training Department.	
3.1.8	Mockups, when needed, are set up to hold work task exposures ALARA. Mockups are coordinated with Health Physics.	
3.1.9	Ensure ASME Section XI Repair and Replacement Program is implemented in accordance with Procedure 20100-C, "ASME Section XI Repair/Replacement Program".	
3.1.10	Ensure that a preventive maintenance program is established and implemented in accordance with Procedure 20015-C, "Preventive Maintenance".	
3.1.11	Ensure that a predictive maintenance program is established and implemented in accordance with Procedure 20016-C, "Predictive Maintenance Program".	
3.1.12	Nuclear Plant Management Information System (NPMIS) is operational to support all scheduled outage plans and the corrective, planned and surveillance maintenance programs.	
3.2	MANAGER OPERATIONS	
	The Manager Operations ensures that the Maintenance Program is supported as follows:	
3.2.1	Operations and maintenance activities are coordinated effectively in accordance with existing plant conditions through the operations representative in the Work Planning Group (WPG).	
3.2.2	WRTs are processed during off-normal working hours for emergency maintenance.	
3.2.3	System status is recorded during work tasks when required.	
3.2.4	Clearances are performed for work tasks.	
3.2.5	Fire Protection (FP) Limiting Conditions for Operation (LCO) action statements are implemented prior to existence of the Limiting Condition to prevent violation of FP operability requirements.	
3.2.6	Numbers are assigned for temporary jumpers and lifted wires in accordance with Procedure "00306-C, "Temporary Jumper And Lifted Wire Control".	

VEGP

00350-C

19

7 of 35

- 3.2.7 Functional test requirements may be assigned and/or changed by a qualified SS or OSOS.
- 3.2.8 All security-related work request are coordinated with the Security Department.
- 3.2.9 Assigns a VEGP licensed certified Operations Department Representative to authorize work that does not affect plant operations.
- 3.2.10 Ensures that Unit Shift Supervisor is cognizant of ongoing work on critical components.
- 3.2.11 Ensures Operations Engineering maintains the critical component List and an updated list is provided to Maintenance Engineering when any changes are made to the List for inclusion into NPMIS.
- 3.2.12 Transient combustible permits or ignition source permits are issued, as required and that the need for a fire watch has been evaluated.
- 3.3 MANAGER ENGINEERING SUPPORT (MES)
- The MES ensures that the Maintenance Program is supported as follows:
- 3.3.1 WRTs are initiated for Plant Modification Packages.
- 3.3.2 Designated work task procedures are provided for Plant Modification Packages.
- 3.3.3 Fire Protection post-work reviews, if applicable, are completed.
- 3.3.4 Shield plug and blockwall removal evaluation is completed if applicable.
- 3.3.5 Scaffolding pre-installation reviews, if applicable, are completed per approved plant procedures for scaffolding control.
- 3.3.6 Numbers are assigned for Temporary Modifications in accordance with Procedure 00307-C, "Temporary Modifications".

PROCEDURE NO		REVISION	PAGE NO
VEGP	00350-C	19	8 of 35

3.3.7 Engineering Support performs reviews required to support and improvement work. Specifically, the HVAC Supervisor/Duty Engineer completes reviews and grants approval of work activities such as welding and painting in areas that can affect exhaust and filtration charcoal beds.

3.4 WORK PLANNING AND CONTROLS SUPERINTENDENT

The Work Planning and Controls Superintendent of the Outages and Planning Department ensures that the Maintenance Program is supported as follows:

- 3.4.1 Work orders receive all required reviews prior to issuing to maintenance.
- 3.4.2 RWP requests are submitted to Health Physics for work in Radiation Control Areas (RCA) usually 24 hours prior to starting work in accordance with Procedure 00930-C, "Radiation And Contamination Control".
- 3.4.3 MWO packages are assembled from WRT'S.
- 3.4.4 MWO packages are reviewed upon completion.
- 3.4.5 Equipment history records are maintained.
- 3.4.6 Maintenance activities are tracked.
- 3.4.7 Maintenance activities are accurately reported.
- 3.4.8 Maintenance work tasks are adequately defined and correctly resolved.
- 3.4.9 MWO packages are evaluated to ensure that acceptance criteria is met.
- 3.4.10 Maintenance work schedules are established.
- 3.4.11 Clearances are initiated for MWO packages.
- 3.4.12 Fire protection work evaluation is performed on all work orders by qualified personnel.
- 3.4.13 Identify MWO as critical component from the reactor trip possible special indicator in NPMIS.
- 3.4.14 Operations Work Planner assigns appropriate functional test requirements.

VEGP

00350-C

19

9 of 35

3.5 MANAGER PLANT TRAINING AND EMERGENCY PREPAREDNESS

The Manager Plant Training And Emergency Preparedness ensures that the Maintenance Program is supported as follows:

- 3.5.1 The OJT Program is coordinated with the Maintenance Department.
- 3.5.2 Adequate / training is provided to keep exposures ALARA as required.
- 3.5.3 Develop Training Programs to meet job qualification requirements established by the Maintenance Department and Outages and Planning Department.
- 3.5.4 Training records are maintained.

3.6 MANAGER HEALTH PHYSICS AND CHEMISTRY

The Manager Health Physics/Chemistry ensures that the Maintenance Program is supported as follows:

- 3.6.1 ALARA reviews are performed on all Radiation Work Permit (RWP) requests per Procedure 00930-C, "Radiation And Contamination Control", and Procedure 00910-C, "VEGP ALARA Program".
- 3.6.2 HP surveys are performed in a timely manner.
- 3.6.3 RWPs are issued per Procedure 43007-C, "Issuance, Use And Control Of Radiation Work Permits" and that proper radiological controls are instituted per 00910-C.
- 3.6.4 When contacted regarding draining of systems (Section 4.1.23) Chemistry is responsible for:
 - a. Evaluating the effect the draining will have on permitted effluent pathways.
 - b. Inspecting the system to evaluate the effectiveness of the corrosion control program, if time permits.
- 3.6.5 Provide for initial reviews of MWO's and SWO's.

PROCEDURE NO	REVISION	PAGE NO
VEGP 00350-C	19	10 of 35

3.7 MAINTENANCE ENGINEERING SUPERVISOR

The Maintenance Engineering Supervisor ensures that the Maintenance Program is supported as follows:

- 3.7.1 Predictive maintenance program work tasks are scheduled, tracked, trended, and evaluated.
- 3.7.2 Preventive maintenance program is maintained. Preventive or Predictive MWO's generated are evaluated to ensure train separation for equipment has been achieved prior to MWO generation.
- 3.7.3 A welding program is maintained in accordance with Procedure 20110-C, "Weld Control Program".
- 3.7.4 NPMIS equipment data base is maintained and periodic coordination with the WPG is conducted to determine need for additional fields for outage support activities.
- 3.7.5 Ensure ASME Section XI Repair and Replacement Program is implemented in accordance with Procedure 20100-C, "ASME Section XI Repair/Replacement Program".

3.8 QUALITY CONTROL SUPERINTENDENT

The Quality Control Superintendent ensures that the Maintenance Program is verified as follows:

- 3.8.1 Inspections, examinations and tests are performed in accordance with Procedure 00201-C, "Quality Control Inspection Program".
- 3.8.2 MWOs are reviewed for quality requirements.
- 3.8.3 Monitoring of work tasks is performed.

3.9 MANAGER OUTAGES AND PLANNING

The Manager Outages and Planning ensures planned outage, forced outage, and refueling activities effectively implement planning, scheduling, and maintenance program requirements as follows:

- 3.9.1 Provides and approves for use all outage planning sequence of events prior to schedule distribution and implementation.
- 3.9.2 Work will be administratively governed by the Plant Administrative, Work Planning, and Outages and Planning procedures.
- 3.9.3 Work plans, procedures and practices shall be under the Nuclear Operations QA Program.
- 3.9.4 Work Orders assigned are packaged, planned, and scheduled by the Modifications and Outage Support Group (MOSG) and reviewed and approved by Work Planning Group.

3.10 MODIFICATIONS AND OUTAGE SUPPORT GROUP (MOSG)
SUPERINTENDENT

The MOSG Superintendent is responsible for certain maintenance support activities and implementing work package, on request.

4.0 INSTRUCTIONS

4.1 WORK REQUEST TAG INSTRUCTIONS

- 4.1.1 When conditions requiring maintenance are identified all plant personnel are responsible for completing a Work Request Tag (WRT). (See Figure 1 for Example)
- 4.1.2 A WRT may be submitted by any individual requesting maintenance support by completing the applicable portions of the WRT and delivering the WRT to the Support Shift Supervisor.

- 4.1.3 When completing the WRT the initiator should give an accurate, concise and complete description of the problem, indications for investigative maintenance, failure description for corrective maintenance, or a summary of the modification/installation for design changes in the problem block. This narrative should provide a clear description without the need to resort to reference documents, i.e., RER's, FCR's, etc.
- 4.1.4 If the WRT is to correct an item identified by a DC, NRC or QA Audit Finding or to address a commitment (regulatory or other) the initiator will indicate so by entering the identifying number in the problem block in addition to the problem description and attach a copy of the commitment, DC, etc. If the WRT was identified during the performance of a surveillance or an MWO, that document number will be referenced.
- 4.1.5 If the WRT is to implement a capital budget item, the general work order (GWO) number should be included in the problem block.
- 4.1.6 The initiator will complete the WRT through the "originator" line, attach the field copy to the component and deliver the WRT to the appropriate shift supervisor or WPG, as appropriate.

Non-corrective maintenance WRT's may be approved and processed by the WPG. (Examples are WRT's for DCP implementation, WRT's to perform planned activities to support outage preparation, etc). If processed by the WPG, the Operations Work Planning reviewer will complete the reviews and sign the OSOS/SS review block, in lieu of the actions required in section 4.1.7.

NOTES

- a. WRT's will be hung for items identified as needing corrective maintenance in the field. Items that are not physically broken, leaking, missing, etc... do NOT require the field copy WRT to be hung. Example of this type may be a WRT for a DCP.
- b. WRT's will NOT be hung on equipment inside the containment.

- 4.1.7 The Shift Supervisor will perform the following:
- 4.1.7.1 Evaluate the WRT for operational deficiencies which require reportability. (The On-Shift Operations Supervisor (OSOS) will make immediate notification to regulatory agencies and ensure a Deficiency Card is initiated in accordance with Procedure 00150-C.) .
- 4.1.7.2 Evaluate the affect on plant operation and initiate compensatory action as required.
- 4.1.7.3 Evaluate the WRT for completeness. If any portion is determined inadequate or lacking in information, he will contact the initiator and/or return the WRT for clarification.
- 4.1.7.4 Assign the appropriate priority as defined below:
- X - Emergency (Sec. 2.11)
 - U - Urgent (Sec. 2.12)
 - 1 - Safety - Personnel, Plant Equipment, Public; LCO or equipment problem which should require a power reduction within 72 hours. Items with a significant impact on plant operation/efficiency.
 - 2 - Other LCO's with 7 day or less shutdown requirements. Items which impact continued plant operation/efficiency or that support surveillances.
 - 3 - Other LCO's, other items affecting plant operations/efficiency. Security, Fire Protection, License Commitments.
 - 4 - Items affecting plant material condition.
 - 5 - Items which may be repaired at any time.
- 4.1.7.5 Indicate associated LCO, Information LCO or Fire Protection LCO numbers in spaces provided.
- 4.1.7.6 Indicate the appropriate mode restraint.

NOTE

The mode restraint evaluation must be made conservatively. If a WRT is written for a problem which would not render a component inoperable, it should still be coded as a restraint to the lowest mode for which that component could be required operable. This ensures a proper evaluation is performed on each WRT immediately prior to a mode change. (In-progress maintenance activities could render a component temporarily inoperable or completed activities could require performance of a functional test prior to a mode change.)

- 4.1.7.7 Indicate if the work may be performed at power or during a unit outage. If outage, the highest mode in which the work may be performed should be indicated (i.e., 1 would indicate it is outage but may be performed in Mode 1 such as a MFWP outage WRT.)
- 4.1.7.8 Indicate special conditions required to perform maintenance by circling the appropriate 2 digit number on the back of the original tag.
- 4.1.7.9 Approve the WRT by signing and dating the WRT forwarding the original WRT to the Work Planning Group and a copy of the WRT to the Engineering Support Department for information.
- 4.1.8 The Work Planning Group (WPG) will process the WRT in accordance with 29402-C.

- 4.1.9 The WPG will determine if the WRT should be processed as a Maintenance Work Order (MWO) or a Support Work Order (SWO).

NOTE

Support Work Orders (SWO's) are generally work items that require less planning and/or administrative controls

- 4.1.10 The following maintenance activities may be addressed without initiation of a Work Request Tag. If a WRT is initiated, it will be processed as a Support Work Order requiring minimal review prior to issuance.
- 4.1.10.1 Replacement of light bulbs, both indication and illumination bulbs.
- 4.1.10.2 Emergency and exit lighting, plant lighting fixtures and field run non EE580 related cabling.
- 4.1.10.3 Maintenance work on non-plant operational equipment by contractors under a maintenance agreement contract given out in accordance with Procedure 70106-C, "Contract Administration".
- 4.1.10.4 Labor items (pumping out ditches or manholes, spill cleanup, transporting barrels, shoring, cribbing, etc.)
- 4.1.10.5 Inking systems on plant chart recorders.
- 4.1.10.6 Security System Camera adjustments and cleaning as requested by the SNS.

CAUTION

Prior to performing any of the following (4.1.10.7 through 4.1.10.24), notify the Unit Shift Supervisor. Notification is also required at the start of each shift, unless the USS indicates otherwise.

- 4.1.10.7 Installing and/or changing identification tags except for ASME Code plates and vendor name plates.

- 4.1.10.8 Replacement of passive accessories, such as knobs, handles, latches (for non-seismic equipment), lens covers (except for those required for Equipment Qualification), thumb screws, etc.
- 4.1.10.9 Tightening of packing on manually operated valves (Motor- and air-operated valve packing adjustments and repacking a valve require a WRT and MWO.)
- 4.1.10.10 Tightening of flanged leaks, fitting leads, etc. on non-safety-related piping and/or tubing.
- 4.1.10.11 Instrument calibrations when required by approved plant procedures for instrument calibrations and/or adjustments when performed using approved plant procedures that require SS notification prior to and or completion of the work.
- When performed during maintenance activities other than surveillances, all pertinent documentation shall be transmitted to Document Control and filed by procedure number.
- 4.1.10.12 Investigative-type work that assists in the determination of problem identification or description. Investigative work may include use of instruments (Fluke meters, VOM, etc.) but does not include component disassembly, lifted leads or other corrective-type maintenance.
- 4.1.10.13 Maintenance activities performed during the performance of approved plant surveillance procedures providing all the requirements of this procedure for the maintenance activity, such as QC review, Equipment Qualification, parts traceability, etc. are met.
- 4.1.10.14 Removal and reinstallation of threaded pipe caps or hose fittings downstream of drains, vents, etc.
- 4.1.10.15 Removal and reinstallation of blind flanges, gaskets, studs, and nuts on pipe downstream of drains and vents. (NON-Q SYSTEMS ONLY)
- 4.1.10.16 Performance of routine lubrication in accordance with Procedure 20411-C, "Control Of Lubricants".
- 4.1.10.17 Installation and removal of scaffolding in accordance with Procedures 20003-C, "Scaffold Construction And Control".

PROCEDURE NO.	REVISION	PAGE NO.
VEGP 00350-C	19	17 of 35

- 4.1.10.18 Removal and reinstallation of insulation in accordance with Procedure 20002-C, "Control Of Insulation Removal And Installation".
- 4.1.10.19 Repairs on telecommunications equipment other than Security Communications equipment.
- 4.1.10.20 Adjustments of pump packing by qualified maintenance personnel (replacement of packing will require a WRT and MWO.)
- 4.1.10.21 Application of sealant to secondary equipment and piping to stop identified in-leakage.
- 4.1.10.22 Repairs to doors. (except fire doors)
- 4.1.10.23 Repair rework and adjustment of tooling that does not have a permanent plant tag number
- 4.1.10.24 Work on ancillary buildings such as the Service Building, Administration Building, etc.
- 4.1.11 Support Work Orders (SWO's) are required for the following:
 - 4.1.11.1 Facility work such as painting, labeling, work on handrails, lighting systems, etc.
 - 4.1.11.2 Spare parts rebuild.
 - 4.1.11.3 Repairs to fire doors.
- 4.1.12 MWOs generated per 4.1.11 will be reviewed as required in accordance with 29402-C.

NOTE

Support Work Orders (SWO's) may or may not require all review signatures. The Work Planner may obtain or N/A any review as determined appropriate.

- 4.1.13 Maintenance will be scheduled and planned so as not to compromise the safety of the plant. Planning will consider the possible safety and ALARA consequences of concurrent or sequential maintenance, testing or operating activities. Equipment required to be operable for the prevailing mode will be available, and maintenance will be performed in a manner such that license limits are not violated. Planning for maintenance will include evaluation of the use of special processes, equipment, and materials in performance of the task, including assessment of potential hazards to personnel and equipment.
- 4.1.14 Work orders which modify the plant configuration will be processed under the controls of procedure 00400-C "Plant Design Control".
- 4.1.15 The WPG will assign the MWO package to the Supervisor/Foreman of the responsible group for implementation of the work package. The MWO will be packaged in accordance with Procedure 29402-C, "WPG Work Request Processing".
- 4.1.16 When personnel are ready to start work, the individual will go to the Control Room and obtain authorization to begin work from the applicable Shift Supervisor (SS), with the following exceptions:

NOTE

When investigative type WO work, not under a clearance, is continued beyond one shift the Unit Shift Supervisor shall be notified at the start of the new shift prior to continuing work, unless the USS indicates otherwise.

- 4.1.16.1 If a WO is security-related and DOES NOT require a clearance, the individual will go to the Supervisor Nuclear Security - Captain (SNS-CPT) to obtain authorization to begin work. The SNS-CPT or designee, will sign the WO to authorize work to begin.
- 4.1.16.2 If a WO is security-related and DOES require a clearance, the individual will go to the Shift Supervisor (SS) who will initial and date the WO and authorize work to begin, in accordance with step 4.1.16.

VEGP

00350-C

19

19 of 35

- 4.1.16.3 If a WO is related to the demin water plant but does not affect the water-making capability of the plant, the individual will go to the Chemistry Foreman to obtain authorization to begin work.
- 4.1.16.4 If the Work Order does not affect plant operation or the load carrying capability of the plant, then the Operations Work Planning representative may approve the WO. These WO's may include but are not limited to: fire protection, coatings, structural, heat tracing, work performed in shops, and other general facility work.
- 4.1.17 Authorized Operations personnel will verify that the equipment or system can be released and determine what length of time it may be out of service.
- 4.1.18 Equipment clearance will be obtained, as necessary, from the SS per Procedure 00304-C, "Equipment Clearance And Tagging" prior to beginning work.
- 4.1.19 If the work task is in a closed tank, vessel, space, electrical manhole, or room with no ventilation, the individual doing the work, prior to beginning the work task, will contact appropriate personnel per Procedure 00258-C, "Safe Work Procedure For Closed Vessels, Confined Spaces, Wet Locations And Systems".
- 4.1.20 If the work task impacts a Fire Protection Program component such that a FP LCO will be entered, the SS will ensure that the required LCO actions are implemented prior to the existence of the limiting condition.
- 4.1.21 The individual foreman/supervisor will designate the appropriate Housekeeping Zone and/or cleanliness controls in accordance with Procedure 20427-C, "Maintenance Cleanliness And Housekeeping Control" and indicate the requirements on the WO Form.
- 4.1.22 Authorization to begin work will be documented on the MWO/SWO by the applicable Shift Supervisor, SNS-CPT Chemistry Foreman, or OPS WPG Rep (See 4.1.16) signing the WO and the Unit SS issuing a subclearance, as required, to the foreman/supervisor responsible for the work.

PROCEDURE NO.	REVISION	PAGE NO
VEGP	00350-C	19
20 of 35		
4.1.23	If the work task requires draining of water in Secondary systems or subsystems, contact Chemistry Section personnel prior to draining. For Primary systems/subsystems contact Radwaste Section Personnel prior to draining.	
4.1.24	The assigned work crew will:	
4.1.24.1	Obtain working copies of procedures as required for data sheets and/or procedures listed or referenced in WO package.	
4.1.24.2	Verify clearance boundaries. Notify Control Room when valves are repositioned during maintenance activities.	
4.1.24.3	Review the RWP, receive a pre-job or post-job radiological briefing (if required), sign in and out on the RWP, and notify HP if the work is suspended or terminated.	
4.1.24.4	Notify QC personnel, four hours in advance, if possible, to witness the predetermined step(s). Work is not to proceed beyond a QC inspection, witness or Hold Point unless a waiver has been approved by QC personnel. Contractor maintenance activities shall be worked to their specific QC/QA procedure where applicable.	
4.1.24.5	Observe safe, efficient, and professional work practices.	
4.1.24.6	Prior to working on equipment, check equipment ID number to be sure the correct equipment is being worked. System draining will be coordinated by Operations with the HP/Chemistry Department.	
4.1.24.7	Investigate and document the cause of the malfunction. Investigations, inspections, examinations and observations pertinent to evaluating the cause of the malfunction and/or corrective action will be documented on the WO.	
4.1.24.8	Attach all applicable documents to the WO package.	
4.1.24.9	Document, on the Work Order, all work performed during the work activity. Should additional space be required to properly document complex work performed, a Work Order Continuation Sheet (Figure 2) will be used. If more than one Continuation Sheet is used, each will be sequentially numbered (in upper-right corner).	

NOTE

If the maintenance required for a particular work order involves more than one crew, each foreman/supervisor will sign and date the WO, that their work is complete or as complete as possible (including specific steps of procedure completed) and has been reviewed and approved prior to the transfer of the WO to the next responsible crew.

- 4.1.24.10 Document the disposition of replaced equipment/parts and list both the old and new part numbers/serial numbers on the MWO.
- 4.1.24.11 If warehouse material was required to complete the work, a check mark will be placed in Block 28. Material/Equipment Request (MER) numbers will be recorded in the block. A copy of the MER will be attached to the Work Order (WO). Lot, reel, spool, heat, grade, part, serial numbers, etc., will be recorded on the WO or the attached MER. All material removed shall be documented on the work order with as much information on the item removed, as available.
- 4.1.24.12 The use of bulk materials, such as, thermal overloads, lugs, fittings, packing, etc., shall be controlled in accordance with Procedure 00352-C, "Control Of In-Process Materials", unless the quality and traceability of the material can be established by other means. The part number and MIR/MER number from the bulk material identification tag will be written on the WO.
- 4.1.25 If all the work required cannot be performed, the work foreman/supervisor will document, on the WO, why the work could not be completed and sign and date at the end of the description. Return the WO package to WPG for further evaluation and/or instructions.
- a. The WPG will determine if the WO is to be revised due to a scope and/or intent change or if a new MWO is required.

- b. When a revision is required, a revision sheet will be initiated and routed for review in accordance with the instructions for WO revision sheet and Procedure 29402-C, "WPG Work Request Processing".
- c. The WO will then be returned to the field for work to be completed as required.
- 4.1.26 During maintenance activities on non-safety related critical components or safety-related components, if it is necessary to change the scope or intent of the work, a new WO will be generated or the original will be returned to the WPG for revision to encompass the changed scope or intent. WPG will determine if a new WO is to be generated or the original WO amended. The new or revised original WO will be processed in accordance with all previous steps of this procedure. If a new WO is issued, it will reference the old WO number.
- 4.1.27 During maintenance activities on non-safety related non critical components, the MWO may be revised by the foreman, as required, to accomplish the required maintenance. If this is required, the foreman should contact the SS, NSSS, or Chemistry Foreman (as outlined in Step 4.1.16) to inform him that additional work is required. The foreman will clearly document all additional work on the WO.
- 4.1.28 The job foreman, upon completion of work, will:
- 4.1.28.1 Review the applicable documentation for completeness and verify that acceptance criteria for the identified problem has been met if known.
- 4.1.28.2 Ensure that any unsatisfactory work results or conditions noted during the performance of the work have been documented on the WO.
- 4.1.28.3 Ensure that the WO is completed, as applicable per 29402-C.
- 4.1.28.4 Inspect and ensure the work area is returned to the level of cleanliness required for the area.
- 4.1.28.5 Ensure the "Work Request Tag" has been removed from the equipment, and attach the WRT to the Work Order (WO)

- 4.1.28.6 Sign and date the appropriate block of the WO after insuring that all blocks that are not applicable are marked N/A.
- 4.1.28.7 Ensure that inspections of work are performed, as required.
- a. Inspections are performed during and/or after the work to ensure the quality of the work and compliance with design. Inspections may be identified and performed by qualified individuals as appropriate.
 - b. The results of all inspections performed will be documented. Further action based on results and the documentation will be part of the WO package. Such documentation may include:
 - (1) Quality Control Inspection Reports,
 - (2) Maintenance Procedure Technical Results,
 - (3) Instrument Control Calibrations, etc.
- 4.1.29 QC personnel will perform required inspections and verifications and document on the WO where appropriate.

NOTE

If work was performed and inspection under a contractor's GPC approved QA/QC Program, the contractor's QA representative will sign and date the WO where appropriate.

- 4.1.30 When the review is complete, the WO package will be returned to the WPG where a functional or special test requirement will be assigned, if required, using Procedure 29401-C, "Maintenance Work Order Functional Tests" as a guideline. After the Functional test is assigned the WO will be forwarded to the appropriate department to perform the Functional test.
- 4.1.30.1 If the WO is sent to any department, other than Operations, for the completion of the functional test requirements, that department will complete the functional test in coordination with the SS, or Chemistry, as necessary.

PROCEDURE NO.	REVISION	PAGE NO.
VEGP 00350-C	19	24 of 35

4.1.30.2 If the functional test is acceptable, the person who performed the functional test will sign and date the WO and check the WO SAT and return the WO to WPG.

4.1.30.3 If not acceptable, indicate "UNSAT" on the WO and sign and date. State the reason for the UNSAT condition in the work performed section of the WO. Return the WO to the WPG for revision or generation of a new WRT and WO closure.

NOTES

- a. The work can continue on an UNSAT WO by use of a revision. A WO is not closed until accepted by the SS, SSS, or SNS-CPT (as appropriate).
- b. Special tests on security systems will be performed by a Security Supervisor, or designee, to ensure regulatory requirements are maintained.

4.1.31 When the work task is complete, the WO package will be returned to the SS, SSS or SNS-CPT (as appropriate, see Step 4.1.16) for closeout as follows:

4.1.31.1 If a clearance was required, the equipment clearance, obtained per Procedure 00304-C, "Equipment Clearance And Tagging", will be closed out, if all sub-clearance holders are signed off.

4.1.31.2 The system/equipment should be restored to normal per the applicable operating procedure as determined by the SS or SSS.

4.1.31.3 Verifying that surveillance, functional, acceptance, inspections and/or special tests are completed, as required, and the WO is completed as applicable.

NOTE

Shield plugs and blockwalls, where required, shall be reinstalled after completion of the functional test or after verification that the functional test does not require access to the component.

- 4.1.31.4 The WO will be signed by the SS, SSS, or SNS-CPT (as appropriate - see Step 4.1.16), if acceptable. If not acceptable, the SS, SSS or SNS-CPT will sign, date, and write UNSAT on the WO.
- 4.1.31.5 The Fire Protection LCO action may be released provided the condition causing the LCO no longer exists.
- 4.1.31.6 All of the WO package will be returned to the WPG except Safeguard WOs, which will be returned to Document Control.
- 4.1.31.7 If related to a security system, ensure that the Security Supervisor has been notified.
- 4.1.32 WO's with partial work complete may be closed if remaining work to be completed is on equipment/items not requiring an WO or on open PM's verified not to have commitments. This only voids remaining work and the WO shall document the reason for not completing remaining tasks.

4.2 CALIBRATION PROGRAM

The preventive maintenance program will determine scope and schedule calibration of instrumentation not covered by Technical Specifications in accordance with Procedure 20015-C, "Prevent Maintenance".

- 4.2.1 Calibration frequencies will be maintained as part of the program.
- 4.2.2 Calibration schedule and frequencies may be altered as operating experience is gained and as equipment history is developed.

VEGP

00350-C

19

26 of 35

4.3 VOIDING WO's

4.3.1 All WO's to be voided will be returned to WPG, with proper documentation on the WO, for evaluation and voiding per Procedure 29402-C, "WPG Work Request Processing".

4.3.2 Open PM's verified not to have commitments may be voided with a statement on the WO noting no commitments identified.

4.4. EMERGENCY MAINTENANCE

4.4.1 Emergency maintenance may be performed without the issuance or approval of an WO or procedure.

4.4.2 Emergency maintenance will be documented and reviewed promptly after completion of the work, or as plant conditions permit by use of the WO.

4.4.3 Emergency maintenance will only be authorized by the General Manager - Nuclear Plant, Assistant General Manager - Plant Operations, OSOS, or their respective designee.

4.4.4 If time permits, an Emergency WO should be processed per Subsection 4.5.

4.5 EMERGENCY WORK ORDER PROCESSING

Under emergency operating conditions, as determined by the On-Shift Operations Supervisor, (OSOS), where immediate actions are required to protect the health and safety of the public and plant personnel, to protect equipment or prevent deterioration of plant conditions to an unsafe level, maintenance activities may be accomplished without the use of written procedures. After accomplishing the maintenance work, it shall be documented and given the same degree of review as though preplanned and performed according to written procedure. Emergency work will be performed as outlined.

4.5.1 If the need for an emergency WO arises, as determined by the OSOS or designee, the OSOS or designee will:

4.5.1.1 Notify on-shift maintenance supervision of the declaration of an emergency WO.

VEGP

00350-C

19

27 of 35

- 4.5.1.2 Notify QC of the emergency WO and request they meet in an area designated by the OSOS.
- 4.5.1.3 Call WPG and get WO number.
- 4.5.1.4 Notify Health Physics if work is to be performed in a Radiological Controlled Area.
- 4.5.2 The Maintenance Supervisor/Foreman will send a crew to the designated area to meet with OSOS, QC and other pertinent personnel.
- 4.5.3 The OSOS will release the personnel to perform the work and make an entry in the Shift Supervisor's log as to the WO Number, foreman responsible for the crew, QC representative present, and course of action agreed upon.
- 4.5.4 The foreman of the crew is responsible for ensuring work is documented in detail, including all parts used (where installed), test equipment and calibration due dates, etc., that the work done can be tracked, and the WO properly closed out.
- 4.5.5 The WO will be routed in a normal manner after completion of the work and functional test, if required.
- 4.5.6 Lack of paperwork or QC representation will not delay work that is necessary to protect the health and safety of the public.
- 4.6 URGENT MAINTENANCE
- Urgent maintenance will require an WO be processed as described in Section 4.1. When the OSOS authorizes an urgent WO, the information for the WO may be provided by telephone to the WPG.
- 4.7 RECORDS
- Records of formal test, inspections, and required data taken during a maintenance activity on safety-related systems or components will be maintained in accordance with Procedure 00100-C, "Quality Assurance Records Administration".

4.8 MATERIAL TRANSFER

When a material transfer between tag numbered items is determined to be expedient to urgent/emergency maintenance, the following steps will be followed:

- a. An emergency/urgent MWO will be initiated in accordance with 4.5 or 4.6 to remove the component. Approval by PRG is required to verify compatible material prior to returning equipment to service.
- b. QC will witness the removal of safety-related components/subcomponents.

4.9 EQUIPMENT QUALIFICATION

MWO's for safety-related equipment, including PERMS and PAM instrumentation (project class 61J) will require a review by the Nuclear Operations Equipment Qualification Group in accordance with Procedure 29402-C, "WPG Work Request Processing".

4.10 CRITICAL COMPONENT PROCESSING

- 4.10.1 Work on critical components should be planned and performed in such a manner to preclude reactor trips and to limit plant exposure to trip potential activities.
- 4.10.2 MWO's should be marked or stamped in such a manner that it is readily known when working on a critical component.
- 4.10.3 When working on critical components:
 - 4.10.3.1 The worker should be knowledgeable and familiar with the task.
 - 4.10.3.2 The task instructions should be completely self-explanatory and fully planned.
 - 4.10.3.3 Any special precautions for the task should be identified and adhered to.
 - 4.10.3.4 Personnel involved in the activity should be briefed of work details, risks, and precautions and limitations.

PROCEDURE NO. VEGP	00350-C	REVISION 19	PAGE NO. 29 of 35
-----------------------	---------	----------------	----------------------

4.10.3.5 Each critical component MWO scheduled should be discussed in the POD until field work is complete. The decision of whether a work order is to proceed until completion without breaks, whether MWO is to be worked by specific individuals at specific times or other limitations will be made at the POD. The goal is minimizing trip potential.

4.10.3.6 Any precautions or limitations can be added to an MWO by OSOS or SS as applicable to ensure clarification of limitations. No scope changes are required.

4.11 PREVENTIVE MAINTENANCE

MWO's for preventive maintenance (PM) will be generated on the NPMIS.

5.0 REFERENCES

- 5.1 Regulatory Guide 1.33, Revision 2, February 1978, "Quality Assurance Program Requirements (Operation)"
- 5.2 ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants"
- 5.3 VEGP Technical Specifications, Section 4.0
- 5.4 Title 29 CFR 1910, Occupation Safety and Health Administration (OSHA 2206, Revised, June 1981)
- 5.5 VEGP FSAR, Section 13.5.1, "Administrative Procedures"
- 5.6 VEGP FSAR, Section 13.5.2, "Operating and Maintenance Procedure"
- 5.7 VEGP FSAR, Section 17.2, "Operations Quality Assurance Program"
- 5.8 NUREG 0800, "Standard Review Plan" Section 9.5.1 and VEGP FSAR Section 9.5.1, "Fire Protection Program"

PROCEDURE NO	REVISION	PAGE NO
VEGP 00350-C	19	30 of 35

- 5.9 PROCEDURES
- 5.9.1 00100-C, "Quality Assurance Records Administration"
- 5.9.2 00108-C, "Control, Approval, And Use Of Vendor Manuals And Revisions"
- 5.9.3 00150-C, "Deficiency Control"
- 5.9.4 00201-C, "Quality Control Inspection Program"
- 5.9.5 00254-C, "Plant Housekeeping/Material Condition Program"
- 5.9.6 00258-C, "Safe Work Procedures For Closed Vessels, Confined Spaces, Wet Locations And Systems"
- 5.9.7 00260-C "Control Of Chemicals/Fluids"
- 5.9.8 00304-C, "Equipment Clearance And Tagging"
- 5.9.9 00306-C, "Temporary Jumper And Lifted Wire Control"
- 5.9.10 00307-C, "Temporary Modifications"
- 5.9 00352-C, "Control Of In-Process Materials"
- 5.9.12 00400-C, "Plant Design Control"
- 5.9.13 00800-C, "Requisition Of Materials And Services"
- 5.9.14 00801-C, "Control Of Onsite Contractors"
- 5.9.15 00853-C, "Material Identification, Control And Issue"
- 5.9.16 00910-C "VEGP ALARA Program"
- 5.9.17 00930-C, "Radiation And Contamination Control"
- 5.9.18 20002-C, "Control of Insulation Removal and Installation"
- 5.9.19 20003-C, "Scaffold Construction And Control"
- 5.9.20 20015-C, "Preventive Maintenance"
- 5.9.21 20016-C, "Predictive Maintenance Program"
- 5.9.22 20100-C, "ASME Section XI Repair/Replacement Program"

- 5.9.23 20110-C, "Weld Control Program"
- 5.9.24 20411-C, "Control Of Lubrication"
- 5.9.25 20427-C, "Maintenance Cleanliness And Housekeeping Control"
- 5.9.26 20429-C "Short Term Documentation Of Temporary Jumpers And Lifted Wires"
- 5.9.27 29401-C, "Maintenance Work Order Functional Test"
- 5.9.28 29402-C, "WPG Work Request Processing"
- 5.9.29 70106-C, "Contractor Administration"
- 5.9.30 70556-C, "Transfer Of Materials From Construction Warehouse To Nuclear Operations"
- 5.9.31 92015-C, "Control Of Transient Combustibles"
- 5.9.32 92020-C, "Control Of Ignition Sources"
- 5.9.33 92026-C, "Fire Protection Work Evaluation"
- 5.9.34 92028-C "Control Of Fire Area Boundaries"
- 5.9.35 92035-C, "Fire Protection Operability Requirements"

END OF PROCEDURE TEXT

FOR EYES ONLY

Work Request Tag

WRT NO. 0001

WRT No. <u>0001</u>
Tag # _____
Date _____

Placed By: _____

Problem _____

SCAFFOLD/LADDER REQ. ? () Y () N

BLOCK WALL/FLOOR PLUG REMOVAL REQ. ? () Y () N

PIPING INSULATION REMOVAL REQ. ? () Y () N

RAD OR CONTAMINATED AREA () Y () N

Comments _____

Location _____

Originator _____ Phone _____

THIS SECTION FOR OSOS/SS USE ONLY	
Is Immediate Notification Required	<input type="checkbox"/> Y <input type="checkbox"/> N
If Yes: <input type="checkbox"/> 1HR <input type="checkbox"/> 4HR <input type="checkbox"/> 24HR	Date _____ Time _____
Priority	<input type="checkbox"/> E <input type="checkbox"/> U <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
LCO # _____	DC # _____
Mode Restraint	<input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6
Special Conditions Indicated on Back	<input type="checkbox"/> Y <input type="checkbox"/> N
Approval _____	Date _____

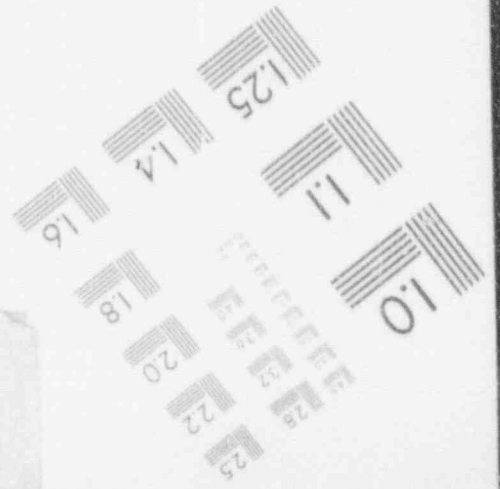
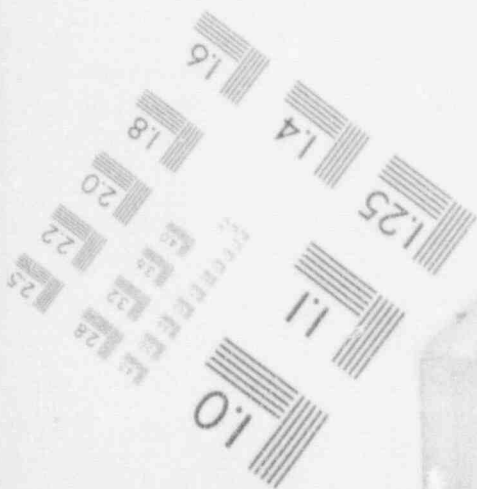
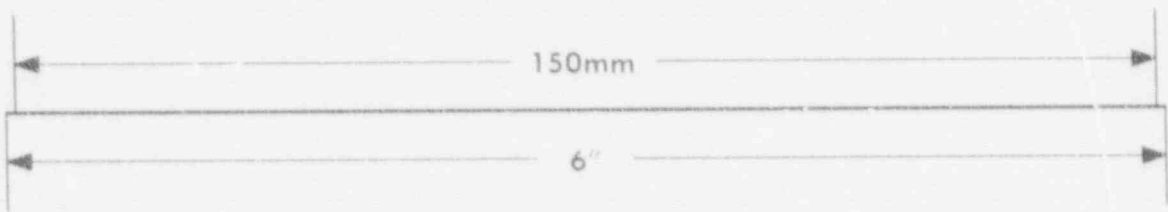
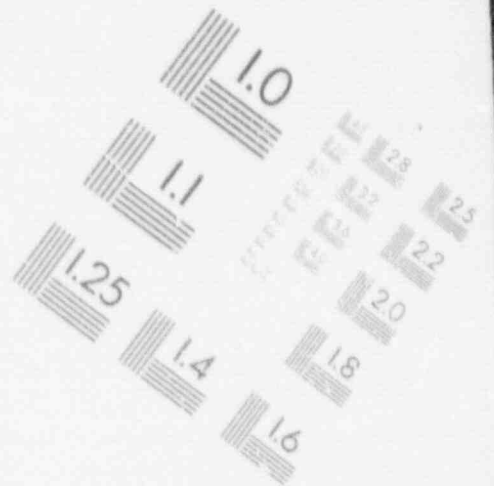
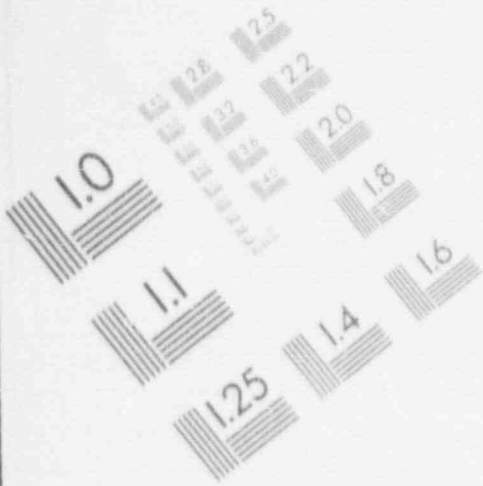
705626A 1250

WORK PLANNING COPY

FIGURE 1 (FRONT)
3 PART CARBON (TYPICAL)

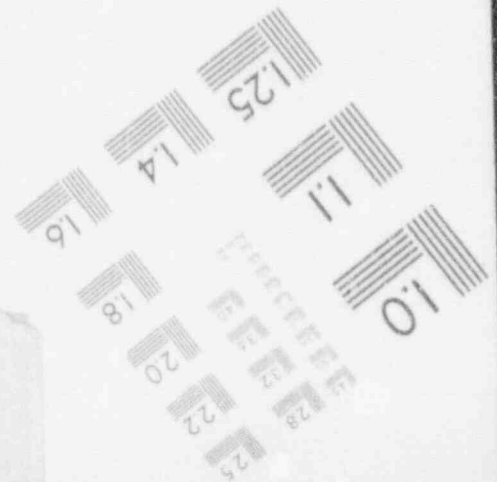
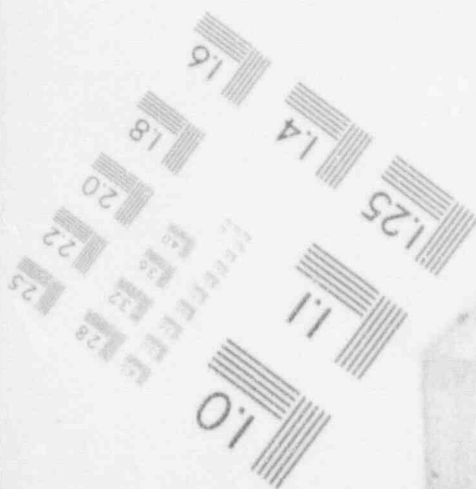
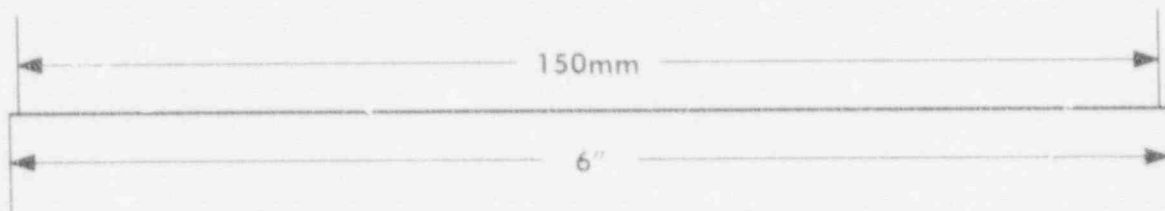
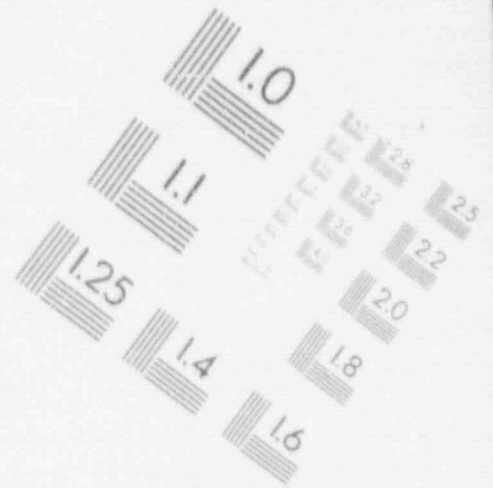
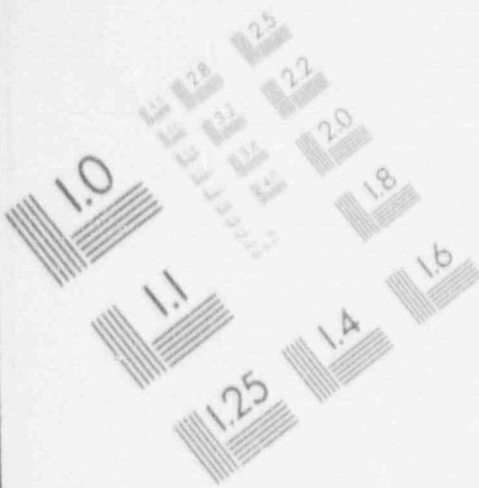
1

IMAGE EVALUATION TEST TARGET (MT-3)



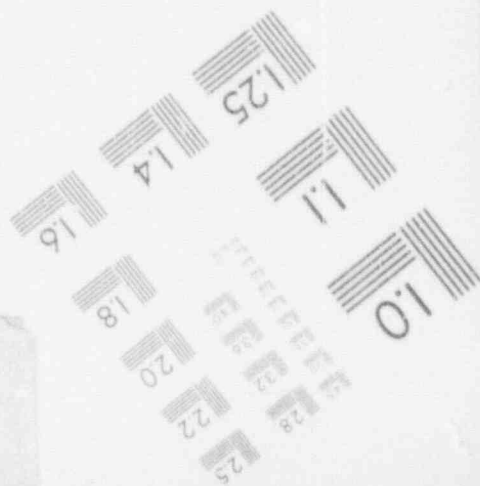
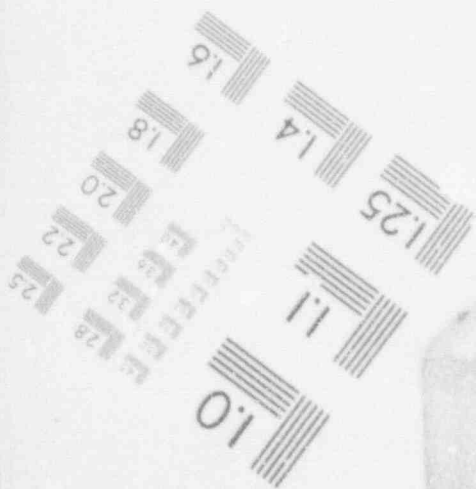
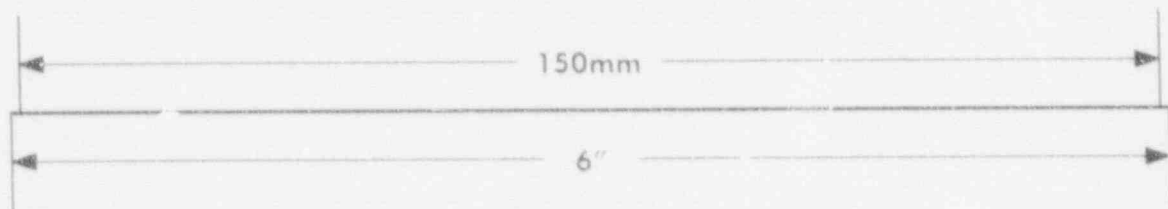
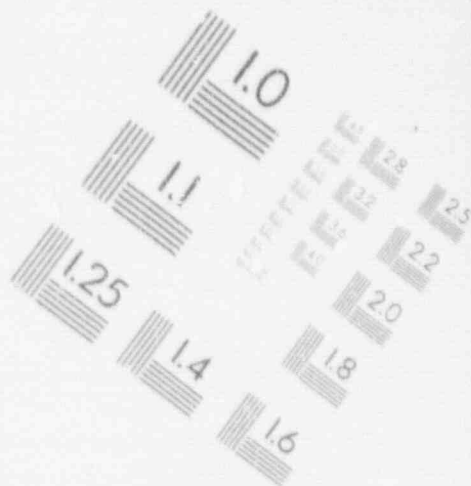
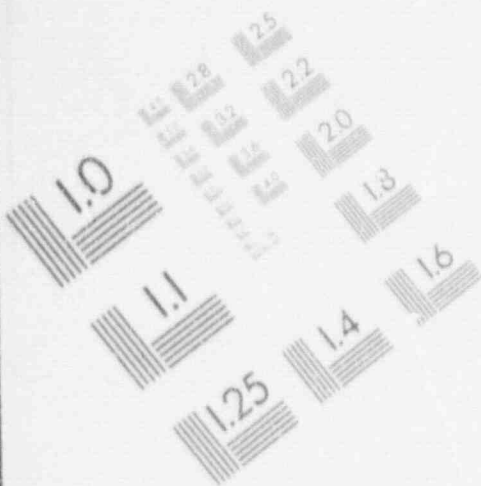
1

IMAGE EVALUATION TEST TARGET (MT-3)



1

IMAGE EVALUATION TEST TARGET (MT-3)





Special Conditions

- 00 No Special Requirements
- 01 Milestones
- 05 Analysis
- 06 Water Treatment Outage
- 07 Aux. Steam/Aux. Bkr. Outage
- 08 Service/Inst. Air Outage
- 09 Fire Protection Outage
- 10 HVAC/Chiller Outage (Non-ESF)
- 11 MSR A&C Outage
- 12 MSR B&D Outage
- 14 Heater Drain Pp Outage
- 16 Condensate Pp Outage
- 17 Circ. Water Box Outage
- 18 'A' Train Fdwtr. LP Htr. Outage (1,2,3)
- 19 'B' Train Fdwtr. LP Htr. Outage (1,2,3)
- 20 'C' Train Fdwtr. HP Htr. Outage (1,2,3)
- 21 'A' Train Fdwtr. HP Htr. Outage (4&5)
- 22 'B' Train Fdwtr. HP Htr. Outage (4&5)
- 23 8.1 Htr. Outage
- 24 66 Htr. Outage
- 25 'A' MFW Pp Outage
- 26 'B' MFW Pp Outage
- 28 Turbine Thr/Rx Trip
- 29 Generator Degassed
- 31 Short Cycle Recirc.
- 32 Circ. Water Pp Outage
- 34 Steam Generator Blowdown Outage
- 36 MBV's Closed
- 38 Vacuum Broken
- 40 Condensat. Sys. Shutdown
- 42 Circ. Wat. Sys. Shutdown
- 44 Containment Entry (Outside Shield)
- 46 Containment Entry (Inside Shield)
- 48 SI Accumulators Drained/Depress.
- 49 Spent Fuel Pool Cooling Outage
- 50 Charging Pp Outage
- 52 RCP(s) Shutdown
- 54 Charging/Loaddown Sys. Outage
- 55 Seal Injection Outage
- 56 RCS Depressurized
- 58 RCS Misloop
- 59 Steam Generator Drained
- 60 Rx Vessel Defueled
- 61 AFW Train System Outage
- 62 SI Pp/Train Outage
- 63 Containm. Spray Pp/Train Outage
- 64 Diesel Generator Outage
- 66 RHR Pp/Train Outage
- 68 NSCW Pp/Train Outage
- 67 HVAC/Chiller Outage (ESF)
- 68 CCW Pp/Train Outage
- 69 Electrical Bus Outage (Mode 5)
- 70 Special Test(s)/Surveillance(s)
- 75 Functional Test Requiring Outage
- 78 CTMT Ft. Requiring Outage
- 80 No Special Conditions

CIRCLE ONE OR MORE

705626A 1250

FIGURE 1 (BACK) (CONT'D.)

WORK REQUEST TAG INSTRUCTIONS

NOTE

These instructions are intended to provide guidance on correctly completing WRT. Blocks not required to be completed for a specific WRT will be marked N/A.

ONLY

WRT No. Control number assigned by the WPG, via NPMIS

MPL Tag The number of the component associated with the work request

Date Date WRT initiated

Placed By Name (printed) of individual hanging tag (N/A if in containment)

Problem Complete Description of problem or reason work is required providing an accurate, complete description of the problem indications for investigative maintenance, failure description for corrective maintenance, or summary of modification/installation for design changes. This should contain as much detail as possible to clearly describe the problem, failure or design change without the need to review reference documents. The problem description should not state what should be repaired/reworked nor should it contain work instructions. General descriptions such as "LPSV 9999 is relieving below setpoint pressure of 350 psig" "Pressure Indicator 1 PI 99999, 0-60 psig, was broken during scaffold installation"; "Loss of breaker control power, Suspect blown fuse", and "Breaker is to normal chilled water pump" are acceptable. If WRT corrects a deficiency identified by a DC, NRC or QA audit finding, so state and enter identifying number. (Initiator or Work Planner)

Location Where equipment is located. Include Building, Level and Room.

Submitted by Name (printed) of individual completing Tag.

FIGURE 1 (CONT'D)

Georgia Power Company
 Venable Electric Generating Plant
 Unit 1 Shift Supervisor Log

XEP-8

OS-111-90

No

5413

Time

Date 3-20-90

0000 New Day - same conditions as before
 0017 OSP 14005-1 Shutdown Margin Calculation for Mode 5 entry complete & sat.
 0230
 0301 18 mc. Calibration on IRE-003 per 43690-1 comp. & sat.
 0355 OSP 14801-1 NSCW XFR PUMP IST complete & sat.
 0411 OSP 14001-1 Shift Area Temperature log complete & sat. for 0400 hours.

0456

Shift

0506

OK

0527

Relieved by Bruce Snider David Woodfin

0623

OSP 14811-1 0370 - Check Valve IST reviewed

0720

SHIFT COMPLEMENT (UNIT #1)

DATE 2-20-90

Mode 4

OSGS Hybin RO Vanner FIRE TEAM
 UNIT SS Snider BOP Haggerty LEADER Chantrow
 SUPPORT SS Chantrow ABO Gandy Leant
 STA FUNCTION Snider BAO Whitson Acosta
 SHIFT CLERK Feader TBO Jackson Tucker
 RWO Wexler CBO Gordon Gordon
 OEO Hatcher

OTHERS

9202210397 920116
 PDR ADOCK 05000424
 S PDR

0740

Batched 2425-1 PE-006 ACCT

0830

Loss of "A" RAT - power to AADJ lost - only RHR train lost A D/G started - then tripped on 5/20
 Entered ACP 18051-1 & 18019-1

0841

D/G 1A auto started by meeting sequence. Tripped on low jacket water press.

0856

D/G 1A locally emergency started, tied to bus auto-
 produced power.

0859

Site area emergency declared for Unit 1 - loss of power - 10 min - loss of steam & condenser power

0900

RHR pump D started - core exit thermal @ 156°F

0915

Commenced cooling core via A RHR

0915

Emergency not functioning

Time

0317

Date 3-20-90

- ~~0954~~ 5/6 manways secured
~~1000~~ ~~Equipment hot to salted~~
0945 Equipment hot to salted
1003 Air-lock functional
1028 Power restored to "B" RAT
1040 10A03 energized from normal source
1042 "B" train Allis energized
1136 "B" RHR started & placed in service. "A" running on minitla
1157 Paralleled "A" 2/6 & AAD2
~~1247~~ ~~Emergency terminated~~
1247 Emergency terminated
1248 DSP 14001-1 Temp sounds received SAT for 1000 idg
1248 DSP 14200-1 Yack spec sounds received SAT for 1000 idg
~~1326~~ ~~3/6 A unutil from grid & secured in standby.~~
1326 3/6 A unutil from grid & secured in standby.
1419 "A" RHR on line, "B" train secured
1520 DSP 14325-1 "Spec. Weekly Serv. Log" reviewed completed SAT.
~~1640~~ ~~DSP 14001-1 Temp sounds received SAT for 1000 idg.~~
1640 DSP 14001-1 Temp sounds received SAT for 1000 idg.
1650 3/6 A "Fe. By" checked "divided" SAT
1650 WRB
1703
1715
1720 Entered LCO 1-90-351 on A 2/6 & B 2/6 insp.
1741 Energized "B" RAT
1824 Relieved by R Diehl Bruce Snider

Georgia Power Company
Vogtle Electric Generating Plant
Unit 2 Shift Supervisor Log

05-11-90 17.
No 2875

Time ^W 0028 Date 3-20-90

0028 24809-2 RUST L-991 ACOT complete and sat.

0050 Enter T.S. 3.2.1 action a, AFD outside target band

0052 AFD restored within target Exit T.S. 3.2.1 action a. (2 penalty minutes)

0058 ~~AFB~~ 3-20-90 Enter T.S. 3.2.1 action a, AFD outside target band.

0100 AFD restored within target. Exit T.S. 3.2.1 action a. (4 penalty minutes total)

0125 Enter T.S. 3.2.1 action a, AFD outside target band

0126 AFD restored within target. Exit T.S. 3.2.1 action a. (5 penalty minutes total)

~~0135 Enter T.S. 3.2.1 action a, AFD outside target band.~~

0138 AFD restored within target. Exit T.S. 3.2.1 action a. (6 penalty minutes total)

0141 AFD outside band

0142 AFD inside band (7 penalty minutes total)

~~0153 AFD outside band~~

0154 AFD inside band (8 penalty minutes total)

0155 AFD outside band

0156 AFD inside band (9 penalty minutes total)

0157 14553-2 ESF ROOM COOLER AND SAFETY (RELATED) CHILLER FLOW PATH VERIF. ^{by hand} complete and sat.

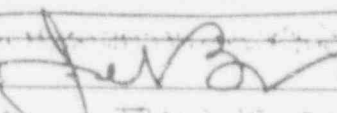
0358 14001-2 Shift Area Temp rounds reviewed complete and sat.

LE0100 Received ALB10J006 annunciation. Initiated 14915-2 Data Sheet 3.

0458 STN

0505 ~~STN~~

0510 ~~STN~~

0522 Received BY G. Moore 

0537 1503 COOL. SAT FOR TRAIL 14 550 PPS

0558 NO FURTHER ENTRIES THIS PAGE

Georgia Power Company
Vogtle Electric Generating Plant
Unit 2 Shift Supervisor Log

No 2876

Time Date 3-20-90

SHIFT COMPLEMENT (UNIT #2)	DATE 3-20-90	PLANT STATUS 100% 1180 MW, 2910 MW
OSOS HOPKINS RO CULLETE FIRE TEAM		226 STEPS, 588.6 °F
UNIT SS G. MOORE BOP R. PSWTH LEADER CHRISTIANSON		CCS U-TURN B CBR HVAC, REOS3,
SUPPORT SS CHRISTIANSON ABO FICKNIS GRANT		PLANT 45A, CS SUP PPS IN MANN, DRPE, PHV PPS
STA FUNCTION SWIDER GAO MEDWIE BRANTLEY		PT 435, PMS + 24V, CANT MAX CLP, JH 4-22
SHIFT CLERK P. JENKINS TBO GRANT GOODRUM		RE 2535; D COND. VESSEL, WGS
RWD HARPER CBO GRANT JACKSON		LOAK TEST
H. J. HESON		
OTHERS		

- 0656 AUTHORIZED START OF "LOOP 1 AT-TANG ACOT; 24810
- 0743 AUTHORIZED START OF 24334 ON CCW PE 1874
- 0817 24910 COMP SAT
- ~~0820 24910 COMP SAT~~
- 0821 MANUAL MSLI
- 0827 ENTERED 19001-2
- 0830 BROKE COND VACUUM DUE TO LOSS OF ALL BUT DC EMER LUBE OIL PP
- 0851 SECURED TDAFW
- 0902 SITE AREA EMER DECLARE FOR U1 LOSS OF ALL AC
- 0930 SITE AREA DOWNGRADED TO ALERT
- 1100 TRIPED RUNNING CIRC PP DUE TO REPORTED CIRC PA VIB. PEO DISPATCHED TO PUMP REPORTED BOTH PUMP DISCH'S OPEN AND THE IDLE PP WAS VIBRATING - NEED TO SHUT DISCH VLV'S ON BOTH PPS PRIOR TO STARTING EITHER
- LE1035 ENTERED 12006 - *18*3 RCP'S RUNNING - 2BAD3 ENERGIZED BY THE B D/G
- 1142 SHUTDOWN MARGIN 14005 COMP SAT.
- 1247 EMERGENCY TERMINATED
- 1404 ENTERED LCD 2-90-097
- 1807 AUTHORIZED START OF 24553 TT-RX TRIP
- 1437 14730 COMP. W/SAT. DUE TO 2BAD3 BEING POWERED FROM THE EMERGENCY DIESEL GENERATOR
- 1446 24555 COMP SAT.
- 1530 24695 - AUTHORIZED START OF HI Ø AT S/D
- 1545 DANNY JAMES OF THE FAA WAS INFORMED THAT THE UNIT 2 COOLING TOWER LIGHTS ARE OFF

Date 3-20-90

1656	
1709	CR 'B'
1716	24696.2 COMP. SAT FOR U31 & U32
1741	Power restored to RAT 'B'
1744	JCR
1822	RELIEVED BY J ROBINSON <i>Ray Meade</i>
1822	Night shift on: <i>JC Pol</i>

05-11-90

Alta Power Company
Electric Generating Plant
Unit 1 Control Log

Date 3/20/90

Time ^{URB} Tuesday

- 0007 14005-1 complete & sat
- 0103 RHR A RS 2457 @ 0205 CST - WILLIAMS
- 0301 Tygon tube 187'8"
- 0350 OSP 14801 complete + sat for MSW transfer pump #8.
- 0409 14001-1 complete
- 0452 ~~Sat~~
- 0453 ~~RS~~
- 0500 ~~→~~ ~~CSC~~
- 0523 Tygon tube @ 187'8" - manned continuously
- 0527 OSP 14811-1 complete + sat for RA X life pump #6.
- 0558 ~~→~~
- 0623 ~~LDV~~
- 0703 ~~Day Shift ON~~ ~~NO~~ ~~OPERATION~~ ~~EXP~~ ~~IN~~ ~~PROGRESS~~ ~~AT~~ ~~THIS~~ ~~PLANT~~ ~~STATUS~~ ~~Mode~~ ~~6~~ ~~100~~ ~~cps~~ ~~RS~~ ~~BRN~~ ~~2457~~ ~~RHR~~ ~~TRAIN~~ ~~A~~ ~~IN~~ ~~SERIES~~ ~~FOR~~ ~~CORE~~ ~~COOLING~~ ~~WASSEL~~ ~~AT~~ ~~MID~~ ~~LOOP~~ ~~OPERATIONS~~
- 0816 OSP-14225-1 OPS Weekly Surveillance logs Complete & Sat
- 0827 ~~LOST~~ ~~OCURRED~~ ~~LOST~~ ~~A~~ ~~RAT~~ ~~-~~ ~~D/G~~ ~~IA~~ ~~TIED~~ ~~AND~~ ~~TRIPPED~~ ~~.~~ ~~ENTERED~~
- 0841 D/G IA Auto Started after Sequence Note
- 0854 ~~Site Area Emergency Declared~~ ~~Loss~~ ~~of~~ ~~Acc~~ ~~7~~ ~~10~~ ~~min~~ ~~;~~ ~~Loss~~ ~~of~~
- 0900 ~~D/G IA Emergency Breakdown START locally~~ ~~MSW~~ ~~PUMP~~ ~~TV~~ ~~STARTED~~ ~~OCURRED~~
- 0900 RHR PUMP A started for shutdown cooling - core exit thermometer
- 0917 Emergency downgraded to an Alert
- 0937 Spent Fuel Pool Cooling Train A returned to service
- 0942 Equipment Hatch bolted in place
- 1029 RAT B Energized
- 1030 Normal Chiller NO.1 placed in service
- 1030 ~~RAT~~ ~~energized~~ ~~to~~ ~~substantive~~ ~~water~~ ~~pumps~~
- 1030 ~~MSW~~ ~~energized~~ ~~from~~ ~~B~~ ~~RAT~~
- 1030 ~~MSW~~ ~~Train~~ ~~B~~ ~~Pumps~~ ~~244~~ ~~started~~
- 1030 ~~MSW~~ ~~Pumps~~ ~~244~~ ~~started~~
- 1030 RHR PUMP B started
- ~~MSW~~ ~~and~~ ~~B~~ ~~in~~ ~~service~~ ~~for~~ ~~shutdown~~ ~~cooling~~ ~~and~~ ~~RHR~~ ~~Pump~~

WGL Power Company
 Electric Generating Plant
 Unit 1 Control Log

Time

Date 3-20-90

- 1155 D/G IA Placed back in remote
 1157 1AA00 Alternate Incoming breaker closed on. Paralleling with OG IA
 1211 D/G IA loaded to 6000wts to be run for 45 minutes due to low
 load operation
 1234 OSP 14000-1 Complete & Set, Day Shift
 1241 Annunciators placed back on normal supply.
 1247 Emergency Terminated
 1324 D/G IA TIE Breaker opened
 1326 D/G IA Shutdown
 1405 D/G IA placed in standby readiness
 1416 RHR Train A Placed in shutdown cooling and RHR Train B removed
 from shutdown cooling & placed on reserve.
 1419 RHR PUMP B Stopped
 1500 Normal Chillers aligned in sequence 2-1
 1648
 1657 WRB
 1705
 LE 1651 Aux Steam Heater Pressured to 200 psig from Aux Boiler & created
 LE 1702 OSP 1495-1 Data sheet 9 complete & out (P.S. 1500 Temp 2170°F)
 1720 D/G IA Declared Draggable LCO NO.
 1741 RAT A Energized.
 1820
 1831 Both Diesel fire water pumps and electric fire pump secured
 and placed into AUTO.

WRS

Date 3-20-90

- 0025 WMT #9 → Riser START
- 0128 BAST 5317 ppm sample @ 0030.
- 0149 RCS diluted 775 gal.
- 0205 RCS diluted 125 gal.
- 0212 RCS diluted 500 gal.
- 0227 RCS Diluted 200 gal.
- 0237 RCS diluted 200 gal.
- 0249 RCS diluted 200 gal.
- 0248 WMT #9 → Riser STOP
- 0300 BAST @ 1233 ppm
- 0334 RCS diluted 200 gal
- 0345 Started riser training NSCW fans and hrs. runs
- 0411 started CCW pump #1, stopped CCW pump #3.
- 0437 STOPPED CCW pump 3, stopped CCW pump 5.
- ~~0453 STOPPED CCW pump #4, stopped CCW pump #5.~~
- 0454 STOPPED CCW pump #5, stopped CCW pump #1.
- 0500 Stop
- 0501 Stop
- 0515 → ChC
- ~~0525 Stop 14803-2. CCW pumps IST, complet + set.~~
- 0611 →
- 0620 →
- 0631 Night shift off, relieved by G. Ouellette, & Wainwright
- 0638 START A.C. #3 for increased demand in turb building (grinders, etc.)
- 0647 Borate 7 gal for temp control
- 0749 Blowdowns for NSCW TR B secured for Chemistry Request
- 0803 Dilute 25 gallons
- 0820 U2 Reactor trip due to turbine trip due to loss of TB RAT. Entered EO
- 0821 Manual MS Isolation to maintain PZR level and pressure
- 0827 Transferred to procedure 19001-2
- 0830 Broke condensor VAC due to loss of All but DC Emergency oil pump (time is approximate)
- 0851 Secure TDAFW pump

Time	Description
0902	Site Area Declared due to loss of A1-A on U1
0915	Power energized to T6 up, to m
0925	Turbine on turning gear
0928	24 V 17.212 Bypass to circ. water. BD isolated due to loss of River pumps
0930	Site Area down graded to Alert
LE0830	mFP B miniflo isolated due to loss of EBUP
LE0845	Cond pump # 2 stopped (# 3 had tripped)
0945	H ₂ isolated to main generator
0945	Page Announcement to Smoking or grinding Turb. Build
0957	Bypass manual circuit switches 2HS: 21 m/a opened
1035	Transferred to 1200 C-C
1100	TRIP CIRC pump 2 due to reported high vibrations
1100	Plant status 2BA03 supplied by DG 2 B, 2NA04
1111	Plant status 2BA03 supplied by DG 2 B, 2NA04 005, 2NA05, RCP 2-4 005 2ND1 Powered by 2NB01
1127	Stop ACCP
1134	Start ACCW PUMP 2 Stop ACCW PUMP 1 to help keep P-102 loaded
LE 1053	14005-2 SHUT BA margin complete & SAT kept .965 SD 3.67% AX/IS
1151	14000-2 Tick Spec Rounds complete except for REC Leak Rate and SAT for mode
1203	Lockout Policy SFT1 Margin P-102 Reset to allow clearing Margin Output Breaker
1231	14915-2 Data Sheet 3 Discontinued due to previous trip
1235	Mike Wright - Chemistry Reports REC Boron CONC 303 ppm taken 3/20/90 1033
1247	Emergency Terminated
1402	Running MG SET shut down due to high Run Temperature - will Restart once CB Hvac Unit Restart
1407	2HS 115 and 2HS 7150 Opened to Wastegass System
LE0631	DAY Shift on RA G. Quillet, Bob B. Smith status BANK 228, REC tour 588.5 No significant problems
1419	14230-2 AC Source Verification Complete & SAT
1434	2HS 115 + 2HS 7150 Closed per RWO Request

05-11-70

①

3/21

1. Unit 1 Control Room Log @ 0859 SAE delayed - loss of power > 10 min
loss of efforts & create power

2. ^{NOTIFICATION FORM #1} 0940 ^{Initial} SAE calls initiated on event initiated @ 0920

State of Ga 1047

No Times for 1) State of S C

2) DOE-SRP

3) Burke County, GA

4) Aiken County, SC

5) Allen County, SC

6) Barnwell County, SC

No Met

3. Identification Form #2 10:03 Downgrade from SAE 0956

• State of Ga 1050

• State of SC 1034

• DOE-SRP 1029

• Burke County Ga 1056

• Aiken County SC 1028

• Allendale County SC 1029

• Barnwell County SC 1022

No Met

3/21/4 - Notification Form #3

- State of Ga. 10 59
- State of SC. No Times
- DOE - SEP "
- Burke County Ga. "
- Acheson County SC "
- Allendale County SC "
- Barnwell County, SC "

No MeT

5 - Notification Form for Event Notification unboxed
• NRC 0958 EST

Date sheet 1 Proc. 91001-C

6 - Ga Power Co. Notification checked

check sheet 4 Proc. 91001-C

- NRC President 0908 no answer
- Mgr. Operation 0909
- Asst. Gen. Mgr. Plant Support 0910
- Mgr. Train SEP 0921

X-EP-110

September 27, 1989

OS-112-90

Memo to: George Bockhold, Jr.
 General Manager Nuclear Plant-Vogtle

Subject: Vogtle Electric Generating Plant - Units 1 & 2
 Quality Assurance Audit Finding Report 350

Ref: Q. A. Audit Report QP12-89/28
 Transmittal Letter Dated June 27, 1989

File: X78G17-P-OP12

Log: OQA-89-292

On September 27, 1989, action taken to resolve the subject Q. A. Open Item was reviewed and determined to be adequate. This item is closed.

G. R. Frederick

G. R. Frederick
 Q. A. Site Manager

JRP/GRF/btp


Attachment

xc: C. K. McCoy
 M. J. Ajluni
 J. N. Roberts
~~_____~~
 W. E. Mundy
 C. T. Davis
 NORMS
 QA File

Audit Finding Report
Safety Audit and Engineering Review

Trend Code: Q1

Responsible Party: J. N. Roberts

AFR No.
OP12-89/28 #350 Reconfirmed Previous Finding No.Tracer No.
OQA-89-200Company/Organization
Georgia Power CompanyProject/Activity
Plant Vogtle - Unit 1/Q. A. Audit of Emergency Plan and ProceduresAuditor(s)
J. R. Petro, Sr. QAFR (ATL), C. T. Tippins, Jr., Sr. QAFR 6/1-15/89Signature: 

Date: 6/27/89

REFERENCE/REQUIREMENTS

10CFR50.72(b)(v) requires that a one hour report shall be made for "Any event that results in a major loss of emergency assessment capability, or communications capability (e.g., significant portion of Control Room indication, Emergency Notification System, or off-site notification system)."

FINDING

There are several emergency response communications systems that could be described as offsite notification systems. Procedure 00152-C revision 7, "Federal And State Reporting Requirements," does not clarify which systems at VEGP are applicable to the requirement. Further, procedure 91204-C, revision 9, "Emergency Response Communications," does not provide instructions for advising Operations should applicable systems fail their periodic tests. Note: Consideration should be given to evaluating each emergency response communications system identified in 91204-C for applicability to the reporting requirements to include degree of failure. The results should be added to 00152-C to provide assistance for Operations personnel to make the reportability decision. This should also be included in 91204-C with instructions for advising the applicable Operations personnel. To the degree that VEGP is involved with testing and maintenance of other communications systems involving Emergency Preparedness (Sirens, Plant Page, National Oceanic and Atmospheric Administration radio, etc.), they should be considered. Although the emergency response communications systems test failures or unsatisfactory results do not require the initiation of a deficiency card per procedure 00150-C, consideration should be given to their inclusion. This would provide additional plant attention and trending which may identify repetitive failures not previously addressed adequately.

RECOMMENDED ITEMS TO BE CONSIDERED IN CORRECTIVE ACTION

1. Investigate the problem and any potential similar conditions.
2. State actions taken to resolve the specific and similar problems.
3. Determine root cause.
4. State actions taken to prevent recurrence.

SEE ATTACHED ROOT CAUSE WORKSHEET FOR RESULTS OF INVESTIGATION AND RECOMMENDED CORRECTIVE ACTIONS TO CORRECT RECURRENT OF THIS FINDING TO INCLUDE A REVIEW TO DETERMINE IF ANY SIMILAR SITUATIONS EXIST.

Supervisor(s)

Carolyn S. Cross 7/21/89

R. M. Odom 7/21/89

Expected Completion Date

9/22/89

- (1) PROCEDURE 91706-C WAS APPROVED BY PRB 9/7/89, GENERAL MANAGER 9/8/89
- (2) PROCEDURE 00152-C WAS APPROVED BY PRB 8/31/89, GENERAL MANAGER 9/18/89
- (3) PROCEDURE 91204-C WAS APPROVED BY PRB 9/10/89, GENERAL MANAGER 9/18/89

THIS COMPLETES ALL CORRECTIVE ACTIONS FOR THIS FINDING.

Supervisor(s)

Carolyn S. Cross 9/19/89 John Lydenberg

Date

9/20/89

JAR 9/19/89

AFR No
OP12-89/28 #350

Tracer No
OQA-89-200

CORRECTIVE ACTION/REVIEW VERIFICATION

ON JULY 28, 1989 I REVIEWED THE INITIAL CORRECTIVE
ACTION PLAN AND FOUND IT ACCEPTABLE; ON AUGUST 2
REVIEWED ^{QPP} ~~QPP~~ 9/2/89 THE REVISION OF 00152-C AND FOUND IT
ACCEPTABLE; ON AUGUST 2 I REVIEWED THE REVISED
RESPONSE FOR REVISION OF 91204-C AND FOUND IT
ACCEPTABLE. ON SEPT. 27 I REVIEWED REVISION 10
TO 91204-C. IT INCORPORATES THE CRITERIA NECESSARY
TO DETERMINE WHEN THE OSOS MUST BE NOTIFIED OF

Signature: *[Handwritten Signature]* Date: 9/27/89

COMMUNICATIONS FAILURES.

[Handwritten Signature]
9/27/89

OPEN ITEM TRACKING SYSTEM

(00409-C)

STATUS: OPEN
REASON DELETED:

UNIT ID: C

CONTROL #: 16435
---MODE---
1 2 3 4 5 6

CURRENT: 890628
ENTERED: 890628
DUE: 890720 8/4/89
CLOSED: 0

TYPE: OPEN ITEM
DEPARTMENT: TRAINING
SECTION: EP
PERSON: J. ROBERTS

SOURCE DOCUMENT: QA AUDIT

RELATED DOCUMENTS: AFR 350

MILESTONE 1,2,3

KEYWORDS:
00058-C ROOT CAUSE REQUIRED

RETURN TO: BILL GABBARD
INSPECTOR: PETRO

RESOLUTION DOCUMENTS
00152-C
91204-C

COMMENTS FOR COMMITMENT 16435

PLEASE NOTE OR ATTACH OBJECTIVE EVIDENCE FOR CLOSURE: THERE IS NO TRIGGER MECHANISM IN 00152-C OR 91204-C TO ASSURE THAT APPLICABLE LOSS OF OFFSITE NOTIFICATIONS SYSTEMS ARE REPORTED TO THE NRC WITHIN ONE HOUR.

RESP. INDIVIDUAL SIGNATURE: *KR Johns* DATE: 7/18/89

VERIFIED BY: _____ DATE: _____

LAST PAGE: 1

MILESTONE EFFORTS:

- 1- REVIEW 91204-C TO PROVIDE SPECIFIC GUIDANCE TO (A) NOTIFY OSOS WHEN COMMUNICATION TESTS RESULTS INDICATE A MAJOR LOSS OF COMMUNICATION CAPABILITY (B) SPECIFY WHAT CONSTITUTES A MAJOR LOSS OF COMMUNICATION CAPABILITY PER 10CFR 50.72(b)(v). - DUE 9/15/89.
- 2- REVIEW 00152-C & 91204-C FOR SIMILAR SITUATIONS TO THIS AUDIT FINDING - DUE 8/4/89
- 3- SUBMIT ANEWS REVISION SUGGESTION FORM FOR 00152-C LISTING THOSE CONDITIONS THAT REQUIRE A ONE HOUR REPORT TO THE NRC UNDER THE MEANS OF MAJOR LOSS OF COMMUNICATIONS CAPABILITY - DUE 8/4/89

ROOT CAUSE DETERMINATION WORKSHEET

UNIT 1 () UNIT 2 () COMMON (X) SHEET 1 OF 2

1. EVENT INVESTIGATED: QA AFR No. OP12-89/28 #350

2. PERSONNEL PERFORMING EVALUATION: J.N. Roberts

3. RESULTS OF INVESTIGATION (Include references and attach continuation sheets if necessary)
 a. Cause: ~~Is~~ Less than adequate procedures.

Recommended Corrective Action(s)
 1. Change procedure EAP 91204-C to provide specific guidance to:
 (a) Notify OS when Cons. results indicate a major loss of communication capability.
 (b) Specify what constitutes a major loss of communication capability per 10CFR 50.72(b)(v) SEE PAGE 2 OF 2
 Resp. Dept. Head KRH Approval: Yes [X] No []
 Estimated Completion Date 9/15/89 OIT Number 16435

4. ROOT CAUSE CATEGORY (Circle One):
 EXTERNAL CAUSE DESIGN HUMAN FACTORS TRAINING
 MANAGEMENT MPC/INSTALLATION PROCEDURES

ROOT CAUSE: Procedures do not provide specific guidance.

JN Roberts 17/14/89
 INVESTIGATOR SIGNATURE DATE
 KRH Holmes 17/15/89
 RESPONSIBLE MANAGER/ERTL DATE

5. OITs initiated; commitments reviewed; corrective action approved.
 Rm... 17/21/89
 NUCLEAR SAFETY & COMP MGR DATE
 c/c 7/21/89

FIGURE 1

CONTINUATION SHEET

Cause:

N/A

Recommended Corrective Action(s)

3. E. Submit a procedure change request to NSAC to change procedure 00158-C listing those conditions that require a one hour report to the NRC under the heading of major loss of communications capability.
Be REVIEW 00158-C 5/10/90 FOR SIMILAR SITUATIONS

Resp. Dept. Head

Approval: Yes No

Estimated Completion Date

8/25/89

OIT Number

16495

Cause:

N/A

Recommended Corrective Action(s)

N/A

Resp. Dept. Head

Approval: Yes No

Estimated Completion Date

OIT Number

Cause:

N/A

Recommended Corrective Action(s)

N/A

Resp. Dept. Head

Approval: Yes No

Estimated Completion Date

OIT Number

FIGURE 1 (Cont'd.)

Memo—Long Form

8/2/89

FROM: Jim Roberts

TO: Bill Gabberd

- NOTE AND FILE
- NOTE AND RETURN TO ME
- RETURN WITH MORE DETAILS
- NOTE AND SEE ME ABOUT THIS
- PLEASE ANSWER
- FOR YOUR APPROVAL
- PLEASE REPLY FOR MY INFORMATION
- IMMEDIATE ACTION
- PER YOUR REQUEST
- SIGNATURE
- FOR YOUR INFORMATION
- INVESTIGATE AND REPORT

Reference: Open Item Tracking System # 16435

Please find attached a Procedure Revision Suggestion Form for procedure 00152-C. This should clarify items of referenced OITS.

Request that item be changed to 9/15/89. By referencing EPIP 91204-C in 00152-C as recommended in that attached Procedure Revision Suggestion Form, a revision of 91204-C will be implemented as part of the next required revision of OITS # 16435.

OPEN ITEM TRACKING SYSTEM

(00409-0)

STATUS: OPEN
REASON DELETED:

UNIT ID: C

CONTROL #: 16435
---MODE---
1 2 3 4 5 6

CURRENT: 890721
ENTERED: 890628
DUE: ~~890807~~ ea/9/89
CLOSED: 0 JAR

TYPE: OPEN ITEM
DEPARTMENT: TRAINING
SECTION: EP
PERSON: J. ROBERTS

SOURCE DOCUMENT: QA AUDIT

RELATED DOCUMENTS: AFR 350

MILESTONES 1, 2, & 3

KEYWORDS:
00058-C ROOT CAUSE REQUIRED

RETURN TO: ~~BILL GARDNER~~
INSPECTOR: PETRO
ALTON RODGERS

RESOLUTION DOCUMENTS
00152-C
91204-C

COMMENTS FOR COMMITMENT 16435

PLEASE NOTE OR ATTACH OBJECTIVE EVIDENCE FOR CLOSURE: THERE IS NO TRIGGER MECHANISM IN 00152-C OR 91204-C TO ASSURE THAT APPLICABLE LOSS OF OFFSITE NOTIFICATIONS SYSTEMS ARE REPORTED TO THE NRC WITHIN ONE HOUR.

MILESTONE EVENTS:

1). REVISE 91204-C TO PROVIDE SPECIFIC GUIDANCE TO (A) NOTIFY OSOS WHEN COMMUNICATION TEST RESULTS INDICATE A MAJOR LOSS OF COMMUNICATION CAPABILITY (B) SPECIFY WHAT CONSTITUTES A MAJOR LOSS OF COMMUNICATION CAPABILITY PER 10 CFR 50.72 (B)(V) -DUE 9/15/89

2). REVIEW 00152-C AND 91204-C FOR SIMILAR SITUATIONS TO THIS AUDIT FINDING - DUE ~~8/4/89~~ 9/15/89 JAR

3). SUBMIT PROCEDURE REVISION SUGGESTION FORM FOR 00152-C LISTING THOS CONDITIONS THAT REQUIRE A ONE HOUR REPORT TO THE NRC UNDER THE HEADING OF MAJOR LOSS OF COMMUNICATIONS CAPABILITY - DUE 8/4/89. COMPLETE

RESP. INDIVIDUAL SIGNATURE: J. Roberts for Tom #3 DATE 8/2/89

VERIFIED BY: _____ DATE: _____

OPEN ITEM TRACKING SYSTEM

(00409-C)

STATUS: OPEN ~~Closed~~ OR
 REASON DELETED:

UNIT ID: C

CONTROL #: 16435

---MODE---

1 2 3 4 5 6

CURRENT: 890802
 ENTERED: 890628
 DUE: 890915
 CLOSED: 0

TYPE: OPEN ITEM
 DEPARTMENT: TRAINING
 SECTION: EF
 PERSON: J. ROBERTS

SOURCE DOCUMENT: QA AUDIT

RELATED DOCUMENTS: AFR 350

MILESTONES: 1, 2, & 3

KEYWORDS:
 00058-C ROOT CAUSE REQUIRED

RETURN TO: ALTON RODGERS
 INSPECTOR: PETRO

RESOLUTION DOCUMENTS

00152-C R/B - PG 10, ITEM 2.7
91204-C R/B - PG 10, ITEM 2.7
91706-C X/2 5.6
5.9.10

COMMENTS FOR COMMITMENT 16435

PLEASE NOTE OR ATTACH OBJECTIVE EVIDENCE FOR CLOSURE: THERE IS NO TRIGGER MECHANISM IN 00152-C OR 91204-C TO ASSURE THAT APPLICABLE LOSS OF OFFSITE NOTIFICATIONS SYSTEMS ARE REPORTED TO THE NRC WITHIN ONE HOUR.

MILESTONE EVENTS

- 1). REVISE 91204-C TO PROVIDE SPECIFIC GUIDANCE TO (A) NOTIFY OSOS WHEN COMMUNICATION TEST RESULTS INDICATE A MAJOR LOSS OF COMMUNICATION CAPABILITY (B) SPECIFY WHAT CONSTITUTES A MAJOR LOSS OF COMMUNICATION CAPABILITY PER 10 CFR 50.72 (B)(V) -DUE 9/15/89
- 2). REVIEW 00152-C AND 91204-C FOR SIMILAR SITUATIONS TO THIS AUDIT FINDING - DUE 9/15/89.
- 3). SUBMIT PROCEDURE REVISION SUGGESTION FORM FOR 00152-C LISTING T-OS CONDITIONS THAT REQUIRE A ONE HOUR REPORT TO THE NRC UNDER THE HEADING OF MAJOR LOSS OF COMMUNICATIONS CAPABILITY - DUE 8/4/89. -COMPLETED

RESP. INDIVIDUAL SIGNATURE: J. Roberts DATE: 9/12/89

VERIFIED BY: _____ DATE: _____

LAST PAGE: 1

Please see attached memo.
JRC

Memo—Long Form

DATE 9/12/89

FROM J.N. Roberts
 TO
 TO Alton Rodgers (3344)
 TO
 TO

- NOTE AND FILE
- NOTE AND RETURN TO ME
- RETURN WITH MORE DETAILS
- NOTE AND SEE ME ABOUT THIS
- PLEASE ANSWER
- FOR YOUR APPROVAL
- PREPARE REPLY FOR MY
- TAKE APPROPRIATE ACTION
- PER YOUR REQUEST
- SIGNATURE
- FOR YOUR INFORMATION
- INVESTIGATE AND REPORT

COMMENTS

Ref: OITC 16435 concerning AFR 350

1. A review of 00152-C and 91209-C has been performed by J.N. Roberts. The that review are reflected in section 5.9.04. Procedures revised to reference 91209-C. This guidance therefore Mikato's work is complete and should be closed.

2. Procedures 91209-C Section 5.9.04 revised to provide specific guidance as recommended by consultant. This procedure is before the PMS for approval. These items should be closed using procedure 91209-C. The 10 has been approved.

J. Mikato

05-113-90

#1 Release
March 20, 1990
9:50 CST

A site area emergency was declared at Vogtle Nuclear Plant near Waynesboro at 9:00 A.M. (CST) today. The emergency was declared due to a loss of on- and off-site power to Unit 1 for approximately 36 minutes. Power has been restored to essential equipment in the plant, and the situation was downgraded to an alert status at about 9:15 A.M. (CST).

Unit 2 tripped off line but did not experience a loss of power and currently is being maintained in a stable condition.

The loss of power to Unit 1 occurred when a construction vehicle backed into a power pole in the switchyard adjacent to the plant.

A site area emergency is declared whenever on- and off-site power is lost for more than 15 minutes. There has been no release of radiation and no danger to the public.

CKmg 1

05-113-90

#2 Release
March 20, 1990
10:30 A.M.

The Vogtle Nuclear Plant continues to operate in "alert" status. "Alert" is the second least serious emergency classification. The plant is stable.

Unit 1 was already down for its second refueling outage. Switchyard maintenance was in progress in connection with that outage when a construction vehicle struck a switchyard power pole. One of two diesel generators attempted to start to supply power, but failed. It then was started manually. The second diesel generator was out of service for planned maintenance, also in connection with Unit 1's planned outage. That inability to supply emergency diesel-generated power for more than 15 minutes resulted in the declaration of the "site area emergency" at 9:00 A.M. (CST). Unit 2, operating at normal power, tripped off-line due to power fluctuations on the Unit 1 side of the plant. Unit 2 did not lose essential electrical power, however.

Shortly after 9:00 A.M. (CST), non-essential personnel were assembled and accounted for in accordance with emergency operating procedures. They were not evacuated as initially reported.

Work is underway to restore normal power to Unit 1.

Neither unit sustained any damage. No one was injured, and there was no release of radioactivity.

PSC LOG
THIS IS NOT A DRILL 03/20/90 (TYPED FOR CLARITY)

05-114-90

*0900 SITE AREA DECLARED
*0930 TEAM #2
*0931 DOWNGRADED TO ALERT
*0940 HMM BRIEFED - STABLE
*0943 GET TWO FIELD MONITORING TEAMS
*0945 TEAM #1 TO HP CONTROL POINT
*0952 TEAM #3 - FIELD MONITORING TEAM (CHEMISTRY) CHANNEL 5
*0954 TEAM #4 - FIELD MONITORING TEAM
*0959 TEAM #2 AT MET TOWER
*0959 LUCOT CALLED IN
*1010 TEAM #5 - LOW VOLTAGE SWITCHYARD
*1010 HMM BRIEFED
*1015 TEAM #6 - ELECTRICIANS - LOW VOLTAGE SWITCHYARD
1025 TEAM #7 - CHECK ELEVATORS
1041 TEAM #6 RETURNED
1042 TEAM #8 - INTEGRATED LEAK RATE TEST DIESEL AIR COMPRESSORS
TEAM #9 - ESCORT AUGUSTA DIVISION
1052 TEAM #8 RETURNED
1055 TEAM #7 RETURNED
1106 TEAM #9 - STEVE HOPKINS
1109 TEAM #10 UNIT 1 CONTROL ROOM
1117 TEAM #10 CALLED
1117 HMM BRIEFED - STILL ALERT
1135 HMM BRIEFED
1153 TEAM #13 - AUX. BOILER (CHANNEL 1)
1157 TEAM #13 ARRIVED AT AUX. BOILER
1200 HMM BRIEFED
1209 TEAM #14 - OUTSIDE BY SOUTH VALVE ROOM BREATHING AIR COMPRESSOR
1211 TEAM #10 RETURNED
1215 TEAM #13 RETURNED
1230 HMM BRIEFED

*CHANGED TIME TO CENTRAL STANDARD FROM LOG

25 Is NOT 2/20/90
+ Drill

133

10:00 Site Incident Declared

10:30 Team # 2

10:31 Downgraded to Alert

10:40 HMMH Briefed - Stable

10:43 Set 2 FM Teams

10:45 Team 1 to P Control Pt

10:52 Team 3 FM (Chem) Channel 5

10:54 Team 4 FM

10:59 Team 1 called in

11:00 Team 2 at Mt Jones

11:10 Team 5, LVSWYD

11:15 Team 6 Electrician - Low Voltage Pt

11:10 HMMH Briefed

10:25 Team 7 Check Elevators

10:42 Team 8 ILBT Diesel

Jan 9 - Escort Augusta Division

10:47 Jean 6 Returned

~~10:48 Jean 8~~

11:17 HMH Briefed - Still Alert-

10:52 Jean 8 Returned

10:55 Jean 7 Returned

" 50 Jean 9 Hopkins

10:59 Jean 10 CR1

11:15 Jean 10 Called

11:35 HMH Briefed

~~11:35 HMH Briefed~~

11:53 Jean 13 Air Boiler Channel 1

11:51 Jean 13 Arrived at Air Boiler

12:02 HMH Briefed

2:09 Jean 14 Outside by South VV Rm ^{Weathering} ~~on~~ ^{the} ~~air~~ ^{congress}

12:11 Jean 10 Returned

12:15 Jan 13 Returned

20 HMM Briefed

NRC

05-115-90

NP:11136 NUCLEAR PLANT MANAGEMENT INFORMATION SYSTEM 03/27/90
 NP1000DM MAINTENANCE WORK ORDER (1 OF 8) 13:29
 PRINT WALKDOWN RPT N PRINTER ID NSACP7R NEXT PAGE 1
 CONC C MW0# 18906328 00 CNTL# ** 3 REP TASK# PRI 30
 DATE 12/04/89 TIME UNIT 1 SYSTEM 2701 STATUS 3P WORK TYPE C SUB TYPE
 REF TASK# STATUS: INIT XMIT NUMBER
 DATE LOADED 12/08/89 TIME LOADED 12:20:47 JOB NUMBER EQ (Y/N)
 TYPE MAINT (P/F) P MW0 SAFETY CLASS (S-SAFETY/N-NON-SAFETY) N
 MPL/TAG 12701CSCP1 TR IND N DESC CENTRAL PROCESSOR NUC CLS 620
 SYSTEM DESC EMERGENCY RESPONSE FACILI NPRD N VEND/MFG DATE CODE
 TECH SPECS
 LOC 1CB1 PAID MECH
 ELEM AX3DAAH01A ELEC CONN

PROBLEM/WORK REQUESTED DESC
 THE FERMS DATALINKS, FROM BOTH THE COMM CONSOLE AND THE MINICOMPUTER,
 TO THE UNIT 1 ERF COMPUTER FAIL INTERMITTENTLY. SUSPECT POSSIBLE CONNec
 TION PROBLEM. *TAG HUNG AT UNIT 1 ERF COMPUTER*

FOR INFO ONLY

LOC: TSC
 WRT 0532
 INITIATOR JOHN EALICK SUPERVISOR WL BARGERON DATE RECD 2/08/90 CONT
 WCC RECEIVED DATE 3/02/90 TEMP MODS
 EQP MODE RECD (O/F/N) REPAIR TAGS 00532
 UNIT MODE RECD (1-6/G/N) NCR/DR # (Y/N) N NCR/DR #
 FIRE PROTECT RELATED (Y/N) N SIGNATURE MATL AVAIL(Y/N) Y
 REJECT CD/NAME/DT DCR # (Y/N) N DCR #
 P2: START END OUTAGE (Y/N) N FORCED REFUEL REFERENCE

 ENTER DATA OR COMPLETE TRANSACTION

7-BK 8-FWD 11-TXT 14-ST HIST/LIST 15-EXIT 16-COMMIT 17-EQP 18-QUIT 19-REP 23-

NUCLEAR PLANT MANAGEMENT INFORMATION SYSTEM

03/27/90

MAINTENANCE WORK ORDER (2 OF 8)

NEXT PAGE 2

13:30:32

03/27/90

C MWU# 18906328 00 CNTL# ** 3 REP TASK# UNIT 1 SYSTEM STATUS 3P WORK TYPE C SUB TYPE M

12/04/89 TIME REQUEST # INSULATION IND REQUEST #

FOLDING IND REQUEST #

OP HP CH SE EL ME IC EN QC DT SCHED DT END

LEAD DISC MAIN RESP FORE TWC CLEAR REQ'D(Y/N) N #

DPT RESP MAINT ICOP RESP SUPV EST WORK DURATH 3.0 PCT COMPLETE

WELD PERMIT REQ'D(Y/N) N # RWP REQ'D(Y/N) N # FUNC TEST(Y/N)

MATL REQ'D (Y/N) Y COMMENTS GP25-907008 W/O PLACED ON HOLD UNTIL AFTER DTG... DATE 12/13/89

RESERVE # QC HOLD PTS (Y/N) N QC REVIEW KEN

CRAFT/COMPLETE MECH N ELEC N I&C N HP N CONT N OTHER N TOTALS

RESP FOREMAN SLB

DATE SCHED START

LATE SCHED END

EST CREWSIZE

EST MANHOURS .0 .0 6.0 .0 .0 .0 .0

EST EXPOSURE

ACT CREWSIZE

ACT MANHOURS .0 .0 .0 .0 .0 .0 .0

ACT EXPOSURE

PROC # 20429-C 23999-C LCO (Y/N) #

WORK RD 3/1/90/SD W/A MICRO COMPUTER BOARD (NQ)

INSTRUCT FOR PART REQUIREMENT.

LOOK FOR DAMAGED OR LOOSE CONNECTIONS AND EITHER REPLACE OR TIGHTEN

THEM TO RESTORE DATA LINKS TO PROPER OPERABILITY. MHG 12/13/89

WORK THIS MWO EITH 18906133.

CONT #

ENTER DATA OR COMPLETE TRANSACTION

PF7--BACK PF8--FWD PF11--CNT TXT PF14--RESERVE LIST PF15--EXIT PF16--COMMIT PF19--CUR

NP11JMG
NP1000DM

NUCLEAR PLANT MANAGEMENT INFORMATION SYSTEM
MAINTENANCE WORK ORDER (3 OF 8)

03/27
13:30

FUNC C MWD# 18906328 00 CNTL# ** 3 REP TASK#
DATE 12/04/89 TIME UNIT 1 SYSTEM STATUS 3P WORK TYPE C SUB TYPE
REF TASK#

NEXT PAGE 3

PRI 30

INITIATION REVIEW

OPS JMK DATE 12/15/89 MNT RHG DATE 12/15/89 HP HMB DATE 12/13/89
ENG WEN DATE 12/13/89 SMI/MER # 90001508
SPECIAL REVIEW NEED(Y/N) N SIGNATURE
SPO KEY RECD COMM

DATE RELEASED FOR WORK 12/16/89 SIGNATURE SC HART

DATE ACTUAL BEGIN DATE ACTUAL END

DUE DATE EARLY START DATE L-TEST END DATE

ACT WORK *

PERFORMED CHECKED CABLES INCRMBY7 AND INCRMBY8 @ COMMUNICATION CONSOLE
AND ERF COMPUTER. RE-TIGHTENED CONNECTIONS. NO PHYSICAL DAMAGE NOTED.
CHECKED CABLES INCRMCXP AND INCRMMCXR @ MINI COMPUTER AND ERF
COMPUTER. RETIGHTENED CONNECTIONS. NO PHYSICAL DAMAGE NOTED. MAINTAINED
ZONE IV CLEANLINESS. CW 1/11/90

PROC. 20424-C USED WHEN CONNECTORS CHECKED. VERIFIED ZONE IV CLEANL-
NESS WAS MAINTAINED. RAH 1/11/90.

CHECKED SIGNAL WITH PROTOCOL ANALYZER (IC440 H/P 10173A) AT ERF 232
FOREMEN

CONT

HIST SUMMARY

PERSON PERFORMING WORK

DATE COMPLETED

MAINT FOREMAN

REVIEW DATE

CORRECTIVE ACTION CODES

ENTER DATA OR COMPLETE TRANSACTION

PF7-BACK PF8-FWD PF11-CONT TEXT PF14-CHECKLIST PF15-EXIT PF16-COMMIT PF18-QUIT

NP1450MG
NP1000DM

NUCLEAR PLANT MANAGEMENT INFORMATION SYSTEM
MAINTENANCE WORK ORDER
CONTINUATION

03/27/90
13 30 32

COMMENT TYPE PERFORMED PAGE 01
LINE CONNECTOR TEST PORT IN PNL 12701C5CP1 (ERF COMPUTER)
FOUND THE ERF COMPUTER POLLING FOR DATA WITH NO RESPONSE
DATA COMING FROM THE COMMUNICATION CONSOLE.
ALSO CHECKED THE SIGNAL IN PNL 116090SR1 (COM CONSOLE) BETWEEN
THE MODERN (80 SHERRAL 01) AND THE TSC LINK MICRO COMPUTER
(SLOT A741) FOUND THE SAME SIGNAL AS ABOVE. THIS INDICATES
THAT THE ERF COMPUTER IS OPERATING CORRECTLY AND THE TSC LINK
MICRO COMPUTER IS INOPERABLE. POWERED B MUX (CON-CONSOLE)
DOWN. REMOVED PCB FROM SLOT A741. CLEANED CONNECTIONS. INSPECTION
SPECTED. REINSERTED PCB. RESTORED POWER. RESET B MUX AND ERF
COMPUTER. FOUND NO CHANGE.
UNABLE TO LOCATE TSC LINK MICRO COMPUTER BOARD #2441B28002
(1X6A201-10003 VOLUME 4 PAGE 5-1-8) IN NUC OPS WHSE.
RETURN TO W/P FOR PARTS LIST. USED 20429-C TO REMOVE AND RE-
CONNECT CABLES FROM THE MODERN AND MICRO COMPUTER. USED 224
08-C TO REMOVE AND REPLACE MICRO COMPUTER BOARD. MAINTAINED
ZONE IV CLEANLINESS.

NEXT PAGE 01

ENTER DATA AND/OR NEXT PAGE, OR FF18
PF15-EXIT PF10-RETURN TO MWO FILE MAINT PF7-BACK PF8-PAGE

DIESEL GENERATOR MEETING

05-116-90

MARCH 31, 1990

SAT. 2:00 PM

ATTENDANCE ROSTER

<u>NAME</u>	<u>TITLE</u>	<u>PHONE NO.</u>	<u>COMPANY</u>
Herbert L. Beacher	Sr. Plant Engr.	3769/138	GPC
J. H. Chenault	Sr. Engr.	(404) 928-1678	ENERCON
M. D. Hunt	Reactor Inspector	404 331 5353	USNRC
Rex Kendall	Sr. Elec. Engr	3775	NRC
Paul M. Recovery	Plant Engr. Supr	3132	GPC
Mike Horton	Mgr Eng Sppt	3121/107	GPC
Ken Stokes	Sr. Plant Engr	3213	GPC
Ken Burr	Sr. Project Engr.	7836	GPC
Mark S. Briney	I&C Superintendant (Acting)	3267/284	GPC
Mime Jones	IIT member	3775	CP&L
Bill Lazarus	IIT Member	3775	USNRC
Al Chaffee	IIT Member	3775	USNRC
Paul Dietz	IIT Member		INPO