



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W.
ATLANTA, GEORGIA 30323

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Report Nos.: 50-338/89-25 and 50-339/89-25

Licensee: Virginia Electric and Power Company
Glen Allen, VA 23060

Docket Nos.: 50-338 and 50-339

License Nos.: NPF-4 and NPF-7

Facility Name: North Anna 1 and 2

Inspection Conducted: August 7-10, 1989

Inspector: W. H. Rankin
for W. M. Sartor, Jr.

10-6-89
Date Signed

Accompanying Personnel: B. Haagensen, PNL (Sonalyst)
S. Ninh, Region II
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Approved by: W. H. Rankin
W. H. Rankin, Chief

10-6-89
Date Signed

Emergency Preparedness Section
Emergency Preparedness and Radiological
Protection Branch
Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This routine, announced inspection was the observation and evaluation of the annual emergency exercise. Observations focused on selected staffing and response of the emergency organizations in the Control Room, Technical Support Center (TSC), Operations Support Center (OSC), Local Emergency Operations Facility (LEOF), and Offsite Monitoring Teams. The inspection also included a review of the exercise objectives and scenario events, as well as observation of the licensee's critique to management.

This inspection also included the review of open items from the Emergency Response Facilities Appraisal.

Results:

In the areas inspected no violations or deviations were identified.

Three exercise weaknesses were identified. The findings considered alone would indicate a licensee failure to demonstrate adequate implementation of the North Anna Emergency Plan; however, scenario/controller problems significantly contributed to the findings. As a result, a separate meeting with licensee

management was held prior to the NRC exit to discuss corrective action. The discussion resulted in the licensee's commitment to: (1) have a significantly improved and challenging scenario for the 1990 annual exercise [to specifically include more OSC repair team involvement], (2) improve exercise control, (3) improve monitoring team response, and (4) to inform the NRC resident inspector when the redemonstration of the protected area accountability drill would be performed that the licensee committed to in their critique. Because of the licensee's commitments and inspector observations that indicated that the licensee's performance would have been satisfactory if permitted to continue without the controller prompting, a redemonstration of the capability to satisfactorily implement the Emergency Plan and Procedures was not required.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *R. Beckwith, Coordinator, Corporate Emergency Planning
- M. Bowling, Assistant Station Manager
- #*W. Cartwright, Vice President, Nuclear Operations
- *J. Collins, Corporate Supervisor, Emergency Planning
- *M. Crist, Supervisor, Operations and Training
- *R. Driscoll, Manager, Quality Assurance
- *R. Enfinger, Assistant Station Manager, Operations and Maintenance
- #*R. Hardwick, Manager, Nuclear Programs
- *S. Harrison, Coordinator, Corporate Emergency Planning
- #*G. Kane, Station Manager
- P. Kemp, Supervisor, Licensing
- *B. McBride, Coordinator, North Anna Emergency Planning
- #*J. O'Hanlon, Vice President, Nuclear Services
- *A. Stafford, Superintendent, Health Physics
- #*W. Stewart, Senior Vice President

Other licensee employees contacted during this inspection included engineers, operators, mechanics, security force members, technicians, and administrative personnel.

Other Organization

- *G. Urquhart, Virginia Department Emergency Services

Nuclear Regulatory Commission

S. Shaeffer (Region II Representative for Resident Inspector)

- *Attended exit interview
- #Attended management meeting prior to NRC exit interview

2. Exercise Scenario (83202)

The scenario for the emergency exercise was reviewed to determine that provisions had been made to test the licensee's integrated emergency response capability as well as to test a major portion of the basic elements within the licensee's Emergency Plan as required by 10 CFR 50.54(t), 50.47(b)(14), and Section IV.F of Appendix E to 10 CFR 50.

The scenario was reviewed in advance of the scheduled exercise date and discussed briefly with licensee representatives at the Controller Briefing on August 8, 1989. There were no major problems identified with the

scenario. During the exercise, however, several problems became apparent with the controllers' implementation of the scenario. Specifically, the controllers excessively prompted the exercise players and prevented the objective evaluation of the licensee's capability to classify the events, assess conditions and respond to the accident. Observations supporting this finding include:

- ° The Control Room Controller prompted the Shift Supervisor to declare the Notification of Unusual Event and the Alert. The evaluator did not observe the Shift Supervisor demonstrate his ability to classify events because he was not given enough time to free-play the classification. The Shift Supervisor never actually classified an emergency during this exercise.
- ° The TSC Radiological Assessment Controller prompted the Dose Projection Team to select the main steam line rupture for the default accident. The team had determined that the steam generator tube rupture was a more appropriate choice. This prompt caused the initial dose projection to be two orders of magnitude higher for iodine levels and caused the Station Emergency Manager (SEM) to declare a Site Area Emergency. This prompt was inappropriate and unnecessary.
- ° The Control Room Controller prompted the SEM to look at Tab G to EPIP-1.01, Loss of Secondary Coolant, as another justification for classifying the Site Area Emergency. The SEM has just classified the event based on Tab E-4, Radioactivity Event. This information was unnecessary and pointed the SEM in the direction of the plant actual conditions instead of allowing him to diagnose conditions at that time.
- ° The TSC Controller prompted the SEM to not declare a General Emergency when the SEM was in the process of evaluating the escalation but prior to making a decision. He should have allowed the SEM to make the decision.
- ° The controller prompted the Control Room Operator to send a plant equipment operator to check the "A" reactor coolant pump (RCP) breaker at 1923 (message OPS-6). This should have been free-played.
- ° The TSC Controller prompted the SEM to direct a site evacuation by prematurely handing out a TSC message that told him to simulate the evacuation. The SEM should have been allowed to direct the evacuation first before being told to simulate the evacuation.
- ° At 2213, the TSC Controller told the players why the "A" steam generator level was not rising in the generator. Although the players were confused, there was no reason to explain this level behavior and stop them from solving the problem themselves.

The above finding was identified as an exercise weakness and will be tracked as Inspector Followup Item (IFI) 50-338, 339/89-25-01.

No violations or deviations were identified.

3. Onsite Emergency Organization (82301)

The licensee's organization was observed during the simulated emergency to ensure that the requirements of Paragraph IV.A of Appendix E to 10 CFR 50 were implemented addressing the descriptions, responsibilities, and assignments of the onsite emergency response organization.

The inspector observed that the initial onsite emergency organization was adequately defined and that staff was available to fill key functional positions within the emergency organization. The Shift Supervisor assumed the position of SEM after being prompted to declare the Notification of Unusual Event (NOUE). Following the Alert emergency classification, the initial emergency response organization was augmented through mobilization of off-shift personnel and corporate personnel.

No violations or deviations were identified.

4. Emergency Classification System (82301)

This area was observed to verify that a standard emergency classification and action level scheme was in use by the licensee as required by 10 CFR 50.47(b)(4) and Paragraph IV.C of Appendix E to 10 CFR 50.

The licensee's Emergency Plan Implementing Procedure (EPIP) EPIP-1.01, Emergency Action Level Table, provided instructions for the classification of off-normal events into one of the four emergency classification levels. The procedure was effectively used by the SEM to correctly classify the Site Area Emergency based on the information available to him at the time.

No violations or deviations were identified.

5. Notification Methods and Procedures (82301)

This area was observed to assure that procedures were established for notification of State and local response organizations and emergency personnel by the licensee, and that the content of initial and followup messages to response organizations was established. This area was further observed to assure that means to provide early notification to the population within the plume exposure pathway were established pursuant to 10 CFR 50.47(b)(5), Paragraph IV.D of Appendix E to 10 CFR 50, and specific guidance promulgated in Section II.E of NUREG-0654.

An inspector observed that notification methods and procedures had been established and were effectively used to provide prompt and accurate offsite notifications to the State and local authorities. The NRC was also notified whenever required. However, the inspector observed that the

use of EPIP-3.01, Callout of Emergency Response Personnel appeared cumbersome, confusing, and contributed to the excessive times required for the staffing of the emergency response facilities. Specifically, although the Alert was declared at 1947 hours, the Security Team Leader, responsible to implement the Callout of the Emergency Response Personnel Procedure, did not become aware of the Alert until the public address announcement at 1958 hours. The two security guards assigned the task of performing the callout made the first call at 2002 hours. Inefficiencies in the callout were observed by the inspector as follows: (1) the guards were not familiar with how to make long distance calls from the telephone provided; (2) the guards were ten minutes into making callouts when they were informed that one guard was to be calling those names in yellow highlight, whereas the other guard was to have been calling those names in green highlight; and (3) the last call was being made at 2033 hours, approximately 45 minutes after the Alert had been declared. During the licensee's critique, the Station Manager acknowledged this problem area and the need to consider using an automatic callout system.

No violations or deviations were identified.

6. Emergency Communications (82301)

This area was observed to assure that provisions existed for prompt communications among principal response organizations and emergency personnel pursuant to 10 CFR 50.47(b)(6), Paragraph IV.E of Appendix E to 10 CFR 50, and specific guidance in Section II.F of NUREG-0654.

The inspector observed communications within and between the licensee's emergency agencies, and the offsite environmental monitoring teams and the EOF. The inspector also observed information flow among the various groups within the licensee's emergency organization. The information flow between the Control Room and the TSC was both timely and accurate, leading to excellent decisionmaking, direction, and control.

No violation or deviations were observed.

7. Accident Assessment (82301)

This area was observed to determine whether adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of radiological emergency conditions were in use as required by 10 CFR 50.47(b)(9), 10 CFR 50, Appendix E, Paragraph IV.B, and specific criteria in NUREG-0654, Section II.I.

The accident assessment program included an engineering assessment for plant status and an assessment of radiological hazards to both onsite and offsite personnel resulting from the accident. In the TSC, the SEM directed the resolution of most of the technical concerns including boration to cold shutdown, residual heat removal (RHR) system warmup from a non-standard lineup, and control of the cooldown rate. The SEM

formulated a severe accident management strategy that was successful under the conditions.

The assessment of radiological hazards was done by the TSC Dose Assessment Team which was able to correctly perform an initial dose assessment using EPIP 4.08, Initial Offsite Release Assessment. However, it was later observed that the TSC was unable to demonstrate the use of the RAD/MET model as the primary dose assessment tool. TSC inputs to the model resulted in negative output values for integrated dose and dose rate. The licensee identified the RAD/MET system deficiencies for correction.

Although procedures were in place for both onsite and offsite monitoring, neither were adequately demonstrated. The onsite (out of plant) monitoring team was not activated and directed to a monitoring location in sufficient time to confirm the offsite release. Likewise, the offsite monitoring team #1, which was accompanied by an inspector, was not dispatched in a timely manner nor was it able to locate the preselected sampling and monitoring location. These observations were summarized as an exercise weakness for failure to meet Health Physics and Chemistry Objective D4; "Demonstrate the capability to perform radiological monitoring activities and assessments, and to formulate offsite radiological dose projections." This finding will be tracked as IFI 50-338, 339/89-25-02.

No violations or deviations were identified.

8. Protective Responses (82301)

This area was observed to determine that guidelines for protective actions during the emergency, consistent with Federal guidance, are developed and in place, and protective actions for emergency workers, including evacuation of nonessential personnel, are implemented promptly as required by 10 CFR 50.47(b)(10), and specific criteria in NUREG 0654, Section II.J.

An inspector verified that the licensee had and used emergency procedures for formulating protective action recommendations for offsite populations within the 10 mile emergency planning zone. An inspector observed that protective actions were initiated for onsite emergency workers following the Alert declaration by conducting a personnel accountability of those personnel inside the protected area.

The personnel accountability was not completed within the desired 30 minutes, rather it required over one hour to perform. An inspector noted that numerous lists of exempt personnel provided to the security people handling the accountability caused confusion and contributed to mistakes. The failure to conduct an accountability within 30 minutes was identified as an exercise weaknesses and will be tracked as IFI 50-338, 339/89-25-03. Licensee management acknowledged dissatisfaction with the accountability during their critique and committed to redo an accountability drill. The inspector requested that the Resident Inspector staff be informed so they could evaluate the drill and close this finding

upon demonstration of acceptable accountability. Licensee management agreed to the request.

No violations or deviations were identified.

9. Exercise Critique (82301)

The licensee's critique of the emergency exercise was observed to determine that shortcomings identified as part of the exercise, were brought to the attention of management and documented for corrective action pursuant to 10 CFR 50.47(b)(14), Paragraph IV.F of Appendix E to 10 CFR 50, and specific guidance promulgated in Section II.N of NUREG-0654.

The licensee conducted effective player critiques following exercise termination. A formal licensee critique of the emergency exercise was held on August 10, 1989, with exercise controllers, key exercise participants, licensee management and NRC personnel attending. Many but not all of the deficiencies and weaknesses in the emergency preparedness program, identified as a result of this exercise, were presented. Followup of corrective actions taken by the licensee will be accomplished through subsequent NRC inspections.

No violations or deviations were identified.

10. Action on Previous Inspection Findings (92701)

This section addresses previously-identified open items from the Emergency Response Facilities Appraisal (ERFA) conducted June 27-30, 1988 (50-338, 339/88-14), and a followup ERFA conducted February 21-23, 1989 (50-338, 339/89-02).

- a. (Closed) ERFA Open Item 50-338, 339/88-14-01: Completion of resolution of differences in dose calculations between the RAD/MET Model and manual method defined in the EPIPs.

The necessary changes have been made to provide consistency between the computer based RAD/MET model and the manual procedure. The following documents have been revised to reflect the changes: EIP 4.08, Initial Offsite Release Assessment, Revision (Rev.) 8, dated July 28, 1989; EIP 4.09, Source Term Assessment Rev. 6, dated July 28, 1989; EIP 4.10, Determination of X/Q, Rev. 6, dated July 13, 1989; EIP 4.11, Followup Offsite Release Assessment, Rev. 7, dated July 28, 1989; EIP 4.27, Use of the Class A Meteorological and Dose Computational Model, Rev. 3, dated July 28, 1989; and EIP Reference Document, RIS-06-07, dated June 14, 1989.

- b. (Closed) ERFA Open Item 50-338, 339/88-14-03: Completion of revision to the EPIPs addressing dose assessment to include separate stability classes for vertical and horizontal diffusion.

Changes have been made to EPIP 4.10, (referenced above) to include the Pasquill-Gifford-Turner stability class tables.

- c. (Open) ERFA Open Item 50-338, 339/88-14-04: Completion of modification of the RAD/MET model to provide dose projection estimates at future plume positions.

The licensee decided that the RAD/MET model would not be modified to include the means of performing dose projection estimates at future plume positions because the RAD/MET software model will be replaced with the MIDAS dose assessment system. This system will include the ability to estimate dose at future plume positions. This issue will be reviewed for closure following MIDAS installation.

- d. (Closed) ERFA Open Item 50-338, 339/88-14-06: Completion of revision of TSC ventilation test procedure 1-PT-77.9 to test system components, including system interlocks.

The necessary revision to the heating, ventilating, and air conditioning (HVAC) system drawings was completed May 5, 1989. Performance Test PT 77.9, TSC Emergency Ventilation System, has been revised to include proper damper operations and Performance Test PT 77.10, LEOF Ventilation System, has been modified to test system interlocks.

- e. (Closed) ERFA Enhancement Item 50-338, 339/89-02-01: Protecting the meteorological tower instrument power supplies from the effects of power surges caused by lightning strike. The work request (88-223) to improve site meteorological tower performance, including installation of power surge protection, has been implemented and the work completed on February 17, 1989.
- f. (Closed) ERFA Enhancement Item 50-338, 339/89-02-02: Replacing the spot meteorological data values available through the safety parameter display system (SPDS) with time-averaged data, except where there is specific need of the spot meteorological data.

The RAD/MET model acquires data from the SPDS and calculates 15 minute averages for use within the model. For the use of personnel who are acquiring meteorological data from the SPDS for use in manual dose assessment calculations, the licensee has decided to institute a filter factor function for wind speed and wind direction data points. This does not provide true time averaged data. It does smooth the data displayed and makes it easier to select a value during conditions of light and variable wind speeds and direction. NUREG-0654 guidance in Appendix A pertains to using time averaged data as input to the Class A model and does not directly relate to the manual back-up calculation method. Although the use of 15 minute average meteorological data in the manual calculations is desirable there are no requirements or guidance directly related to this.

- g. (Closed) ERFA Enhancement Item 50-338, 339/89-02-03: Developing a procedure to test throw-over feature of the UPS bus.

A performance test procedure (1-PT-88.2) has been written to test the throw-over feature of the TSC UPS bus. This procedure was reviewed and found to be included on the preventive maintenance schedule.

- h. (Closed) ERFA Enhancement Item 50-338, 339/89-02-04: Providing a preventive maintenance program for key emergency ventilation system components.

The TSC HVAC preventive maintenance procedure (M-10-HV/M-4) was modified to include all TSC HVAC units in one procedure. The LEOF procedure (M-10-HV-M-1) was modified to include dampers and emergency exhaust fan. A system walkdown has been completed to identify improperly labeled equipment. Tags and labels have been prepared and affixed to system equipment and dampers.

11. Exit Interview

The inspection scope and findings were summarized on August 10, 1989, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results listed below. The adequacy of the licensee and critique was also discussed as a potential finding, but based on additional information provided to the inspector it was considered adequate.

The licensee did not identify as proprietary any of the material provided to or reviewed by the inspector during this inspection.

<u>Item Number</u>	<u>Description and References</u>
50-338, 339/89-25-01	Controller excessively prompted players and prevented the objective evaluation of licensee's capability to classify, assess, and respond to the accident (Paragraph 2).
50-338, 339/89-25-02	Failure to demonstrate the capability to perform radiological monitoring activities and assessments, and to formulate offsite dose projections (Paragraph 7).
50-338, 339/89-25-03	Failure to conduct personnel accountability inside the protected area within 30 minutes (Paragraph 8).

Attachment:
Objectives of Exercise
and Scenario Narrative

OBJECTIVES OF EXERCISE

The objectives of this exercise are to demonstrate by actual performance a number of key emergency preparedness functions as they relate to the North Anna Power Station (NAPS) Emergency Plan. The simulated accident will involve response and subsequent recovery actions to include: emergency classification, notification of the company personnel and off-site organizations, simulated actions to correct the emergency condition, and initiation of accident assessment and protective actions as necessary to cope with the event. In addition, the exercise will simulate an emergency that results in off-site radiological releases which would normally require response by off-site authorities. Simulations of some aspects of emergency preparedness, without actual demonstrations by the Station or Corporate entities, may occur where it is deemed impractical to call for personnel involvement.

The following objectives have been developed in order to establish the scope of the 1989 NAPS emergency exercise. The objectives ensure that required events are included in the exercise scenario, and establish criteria to be evaluated by controllers and observers during the actual conduct of the exercise.

A. OVERALL OBJECTIVES

1. Demonstrate the ability to establish and maintain emergency management command and control authority at emergency facilities, and maintain continuity of authority throughout the exercise.
2. Demonstrate the ability to classify actual or potential emergencies in accordance with NAPS Emergency Plan Implementing Procedures.
3. Demonstrate the ability to formulate and make protective action recommendations to protect station personnel and the general public based on plant parameters and/or field monitoring information as required by the scenario.
4. Demonstrate the ability to augment the on-shift emergency organization to support emergency operations in a timely and effective manner.
5. Demonstrate the ability to develop alternative systems or equipment alterations in response to accident affected plant systems or components and to formulate respective procedures to accompany these required modifications, if necessary.
6. Demonstrate the capability to ascertain and to requisition the necessary parts to perform corrective maintenance on damaged equipment, if necessary.
7. Simulate transition into the recovery mode. Requests for simulated technical support may be made, as well as transmitting information to the facilities needed for recovery support.
8. Conduct an exercise that is initiated between the hours of 6:00 p.m. and midnight.
9. Conduct an effective critique in order to disclose significant exercise findings which require corrective action.

B. OPERATIONS OBJECTIVES

1. Demonstrate proficiency in evaluating parameters, properly categorizing the situation utilizing the station's emergency action level scheme, and making the requisite emergency classification.
2. Demonstrate efficient and effective use of notification/alerting procedures and methods.
3. Demonstrate effective communications/informational flow from the control room to supporting locations.

C. SECURITY OBJECTIVES

1. Demonstrate the adequacy of access control and security for designated emergency response facilities.
2. Demonstrate station employee accountability.
3. Demonstrate the ability to implement site access control procedures.
4. Demonstrate call-out of emergency response personnel.

D. HEALTH PHYSICS AND CHEMISTRY OBJECTIVES

1. Demonstrate the necessary radiological controls to remove a contaminated injured individual from an accident scene and to assist the medical team in minimizing the consequences of a contaminated individual.
2. Demonstrate the capability to perform radiological monitoring activities and assessments, and to formulate off-site radiological dose projections.
3. Demonstrate collection and analysis of water, vegetation, soil, and air samples both on-site and off-site, as appropriate.
4. Demonstrate use of communications by the monitoring teams, to include sending, receiving, and understanding message content.
5. Demonstrate response to and analysis of simulated elevated airborne and/or liquid activity levels (as appropriate), and of simulated elevated area radiation levels.
6. Demonstrate initiation and use of appropriate procedures for the collection, analysis, and documentation of Environmental Monitoring samples, and for Radiological Monitoring evaluation.
7. Demonstrate the ability to assess data obtained as a result of sampling activities, and the ability to factor results into the overall assessment process.

E. HEALTH & SAFETY OBJECTIVES

1. Simulate the injury and contamination of one employee and demonstrate the following:
 - a. Transportation to an off-site medical facility; and
 - b. Participation by the off-site medical facility.
2. Demonstrate that surrounding Volunteer Rescue Squads can send supporting units to the station and simulate successful life support missions in coordination with station personnel assigned to the tasks.

F. EMERGENCY RESPONSE FACILITY OBJECTIVES

1. Demonstrate the staffing of the following Emergency Response Facilities:

Control Room (CR)
Technical Support Center (TSC)
Operational Support Center (OSC)
Local Emergency Operations Facility (LEOF)
Corporate Emergency Response Center (CERC)

2. Demonstrate the communications capabilities of the Control Room, TSC, OSC, LEOF, and CERC, and the ability to maintain these communications with Federal, State, and local governments. This will include sending, receiving, and understanding the content of messages involved.
3. Demonstrate the proper utilization of the emergency response facilities and that adequate emergency response equipment exists.

G. CORPORATE OBJECTIVES

1. Demonstrate that the LEOF can be adequately staffed and communications properly established.
2. Demonstrate that the CERC can be adequately staffed and made functional (e.g., maintain communications, provide engineering assistance, provide logistic support, and establish a Rumor Control group).
3. Demonstrate the activation of the media centers.
4. Demonstrate the timely release and distribution of news announcements.
5. Demonstrate coordination of news announcements with off-site emergency response agencies.
6. Demonstrate the ability to conduct timely and informative media briefings.
7. Demonstrate the ability to respond to outside news inquiries, if received.

VIRGINIA POWER
NORTH ANNA POWER STATION
1989 EMERGENCY EXERCISE

SCENARIO NARRATIVE

A small scale emergency exercise is scheduled to be conducted at the North Anna Power Station on August 8, 1989. Unit 1 is designated as the affected unit for the exercise.

Unit 1 is operating at 100% full power equilibrium. The reactor core is near end of life and reactor coolant fission product inventory is high. Unit 2 is operating at 100% full power after recently completing a refueling outage.

The exercise is initiated by a first aid emergency involving a Chemistry Technician in the Hot Lab. The individual is contaminated by primary coolant and requires transport to an off-site medical facility for treatment. Response to this incident requires participation by a local rescue squad in support of station personnel attempting to mitigate the event. The transport of the contaminated individual off-site requires declaring a "NOTIFICATION OF UNUSUAL EVENT" classification.

Further into the scenario, the Control Room receives indication of high vibration on "A" Reactor Coolant Pump (RCP) followed by erratic seal leakoff. Ultimately, "A" RCP trips followed by a reactor trip/turbine trip. Slight fuel failure occurs, due to loose parts, resulting in the primary activity increasing. The indication on the Letdown Radiation Monitor then exceeds 1×10^6 counts per minute (CPM), and conditions require declaring an "ALERT" classification.

A tube leak develops in the "A" Steam Generator, increasing from < 1 gallon per day (GPD) to almost 5 gallons per minute (GPM) over a 20 minute period. The "A" Main Steam Line, Steam Generator Blowdown, and Condenser Air Ejector radiation monitor indications increase respective to this event. When the "A" Main Steam Trip Valve is shut to isolate the Steam Generator, a Main Steam Code Safety Valve fails open, resulting in a Safety Injection initiation and the establishment of an effluent release pathway. These conditions require declaring a "SITE AREA EMERGENCY" classification.

Approximately 40 minutes later the Main Steam Code Safety Valve is re-seated. Sufficient time is now permitted to exercise the off-site response actions followed by exercise termination.