



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37379-2000

September 26, 2008

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of)
Tennessee Valley Authority)

Docket Nos. 50-327
50-328

SEQUOYAH NUCLEAR PLANT (SQN) - UNITS 1 AND 2 - REQUEST FOR ENFORCEMENT DISCRETION FOR TECHNICAL SPECIFICATION (TS) LIMITING CONDITION FOR OPERATION (LCO) 3.0.5, INOPERABILITY DUE TO LOSS OF A MAIN CONTROL ROOM AIR HANDLING UNIT (AHU) IN CONJUNCTION WITH AN EMERGENCY POWER SOURCE OUT-OF-SERVICE

This letter documents our request for enforcement discretion for SQN Units 1 and 2 for TS LCO 3.0.5. Enforcement discretion was needed to prevent an unnecessary plant shutdown as a result of the unplanned failure of the motor for the B train main control room (MCR) AHU in conjunction with planned maintenance to replace the batteries for the 1A-A emergency diesel generator (EDG). TS LCO 3.7.15 requires two independent control room air-conditioning systems (CRACS) to be operable. LCO 3.0.5 allows a component to be considered operable if the normal or emergency power source is operable and all redundant components are operable. Otherwise, actions shall be initiated within 2 hours to place the unit in a mode where the LCO (3.7.15) does not apply by placing the unit in hot standby within 6 hours and hot shutdown within the following 6 hours and cold shutdown within 24 hours.

SQN Units 1 and 2 entered TS LCO 3.8.1.1 action (b) due to the EDG 1A-A battery being inoperable for a scheduled maintenance activity (replacement of all battery cells) on September 24, 2008 at 1705 Eastern daylight time (EDT). Subsequently, the motor failed on the B train MCR AHU and LCO 3.7.15 Action (a) was entered on September 25, 2008 at 2255 EDT. Additionally, both units entered LCO 3.0.5 due to the emergency power source to the redundant (Train A) MCR AHU being inoperable. Detailed justification for the notice of enforcement discretion (NOED) is provided in the enclosure.

U.S. Nuclear Regulatory Commission
Page 2
September 26, 2008

TVA had estimated that 36 additional hours would be needed to complete these activities in lieu of Unit 1 and 2 shutdowns. TVA identified actions to correct the failure and a plan for repairing the B-B MCR AHU motor by September 26, 2008, in addition to returning the 1A-A EDG to operable status. Subsequently, SQN exited the 1A-A EDG LCO at 1400 EDT and exited LCO 3.7.15 at 1608 EDT.

As discussed with NRC staff during a telephone conference on September 26, 2008, TVA has initiated compensatory measures to administratively control and protect vital plant equipment and to ensure that plant equipment can perform its design function during this period of time for completing maintenance to replace the batteries for the 1A-A EDG and the unplanned maintenance for replacing the motor in the B-B MCR AHU. During that telephone call, NRC granted TVA's verbal request for enforcement discretion and agreed that a follow-up license amendment was not needed. This letter documents the verbal request TVA made and received for enforcement discretion on September 26, 2008.

There are no regulatory commitments associated with this submittal.

If you have any questions about this change, please contact me at 843-7170 or Rusty Proffitt at 843-6672.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 26th day of September 2008.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. D. Smith', with a stylized flourish at the end.

J. D. Smith
Manager, Site Licensing
and Industry Affairs

Enclosure:
cc: See page 3

U.S. Nuclear Regulatory Commission
Page 3
September 26, 2008

Enclosure

cc (Enclosure):

Mr. Brendon T. Moroney, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop 08G-9a
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852-2739

U.S. Nuclear Regulatory Commission
Page 4
September 26, 2008

JDS:ZTK:PMB

Enclosure

cc (Enclosure):

- G. Arent, EQB 1B-WBN
- T. J. Bradshaw (NSRB Support), BR 4X-C
- W. R. Campbell, Jr., LP 3R-C
- C. R. Church, POB 2B-SQN
- T. P. Cleary, OPS 4A-SQN
- D. E. Jernigan, LP 3R-C
- K. R. Jones, OPS 4A-SQN
- M. J.. Lorek, LP 3R-C
- L. E. Nicholson, LP 3R-C
- M. A. Purcell, LP 4K-C
- L. E. Thibault, LP 3R-C
- S. A. Vance, ET 10A-K
- G. E. Vickery, OPS 4A-SQN
- E. J. Vigluicci, ET 10A-K
- WBN Site Licensing Files, ADM 1L-WBN
- EDMS, WT CA-K

TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT (SQN)
UNIT 1 AND 2
DOCKET NOS. 327/328

REQUEST FOR ENFORCEMENT DISCRETION FOR TECHNICAL SPECIFICATION (TS)
LIMITING CONDITION FOR OPERATION (LCO) 3.0.5

BACKGROUND

TVA is requesting enforcement discretion for SQN Units 1 and 2 for TS LCO 3.0.5. Enforcement discretion was needed to prevent an unnecessary plant shutdown as a result of unplanned failure of the B train main control room (MCR) air handling unit (AHU) motor in conjunction with the planned maintenance to replace the batteries for the 1A-A emergency diesel generator (EDG).

On September 24, 2008, at 1705 Eastern daylight time (EDT), Technical Specification (TS) LCO 3.8.1.1, "A/C Sources," Action (b) was entered for scheduled maintenance of the 1A-A emergency diesel generator (EDG) 125-volt battery bank. At the time of entering the LCO, both Unit 1 and Unit 2 were operating in Mode 1. The scheduled battery bank maintenance was expected to take approximately 64 hours. On September 25, 2008, at 2255, LCO 3.7.15, "Control Room Air-Conditioning System (CRACS)," Action (a) was entered due to the loss of the associated "B" train MCR AHU. Under this condition both units entered TS LCO 3.0.5, which requires within 2 hours, action to be initiated to place a unit in a mode of condition in which the applicable LCO does not apply. In this case, the LCO action would be satisfied by placing each unit in hot standby within the next 6 hours, hot shutdown within the following 6 hours and cold shutdown within the subsequent 24 hours.

This notice of enforcement discretion (NOED) requests discretion for Units 1 and 2 from compliance with SQN TS 3.0.5 for the condition of the CRACS train "A" being inoperable solely due to its emergency power source unavailable (i.e., EDG 1A-A) and its redundant train being inoperable. Within this NOED, TVA is requesting an additional 36 hours from the expiration time of LCO Action 3.0.5 to be in hot standby to return the EDG 1A-A battery bank and its associated EDG to operable status.

SQN TS LCO 3.0.5 currently states:

"When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), subsystem(s), train(s), component(s) and device(s) are OPERABLE, or likewise satisfy the requirements of this Specification. Unless both conditions (1) and (2) are satisfied, within 2 hours action shall be initiated to place the unit in a MODE in which the applicable Limiting Condition for Operation does not apply by placing it as applicable in:

1. At least HOT STANDBY within the next 6 hours
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

This Specification is not applicable in MODES 5 or 6.”

The CRACS provides temperature control for the control room during normal operation and following isolation of the control room. The Unit 1 and Unit 2 control room is a common room served by a shared CRACS.

The CRACS consists of two independent and redundant trains that provide cooling of recirculated control room air. Each train consists of a chiller package, cooling coils, air handling unit, instrumentation, and controls to provide for control room temperature control. A single train will provide the required temperature control.

TVA has reviewed the "NRC Regulatory Issue Summary 2005-01, Changes to Notice of Enforcement Discretion (NOED) Process and Staff Guidance," and "Inspection Manual, Part 9900: Technical Guidance, Operations Notices of Enforcement Discretion," and has concluded that Section 2.1, Situations Affecting Radiological Safety-Regular NOEDs, Criterion 1.a is satisfied. This criterion applies to plants in power operation desiring to avoid unnecessary transients as a result of compliance with the license condition and, thus, minimize the potential safety consequences and operational risks. The basis for this conclusion and other information required to support a request for NOED is provided below.

1. *The TS or other license conditions that will be violated.*

With CRACS train “A” inoperable solely due to its emergency power source unavailable (i.e., EDG 1A-A) and then its redundant train becoming inoperable, application of TS LCO 3.0.5 is required. TS LCO 3.0.5 mandates within 2 hours, action to be initiated to place a unit in a mode in which the applicable LCO does not apply. This would require placing both units in hot standby within the next 6 hours, hot shutdown within the following 6 hours and cold shutdown within the subsequent 24 hours.

2. *The circumstances surrounding the situation: including likely causes; the need for prompt action; action taken in an attempt to avoid the need for an NOED; and identification of any relevant historical events.*

At 1705 on 09/24/08, EDG 1A-A was declared inoperable in preparation for EDG 125-volt direct current (dc) battery bank maintenance.

At approximately 2250 on 09/25/08, a swap of CRACS train “A” to “B” was attempted, at which time the “B” train AHU tripped when attempting to start. Train “A” continued to operate.

At 2255 on 09/25/08, CRACS “B” train was declared inoperable from an investigation where smoke and a burnt smell from the B-B MCR AHU motor were indicated.

At 2255 on 09/25/08, TS LCO 3.0.5 was entered with both units required to be in hot standby at 0655 on 09/26/08.

At 2345 on 09/25/08, the NRC Resident was notified.

At 0038 on 09/26/08, a maintenance work order had been written to repair the B-B MCR AHU motor.

At 0507 on 09/26/08, the EDG 1A-A battery bank was aligned to the 125-volt dc distribution board and charger.

At 1400 on 09/26/08, EDG 1A-A was declared operable.

Maintenance work order number 08-779987-000 was written at 0038 on 09/26/08 to repair the B-B MCR AHU motor. A maintenance team was promptly dispatched to investigate the B-B MCR AHU motor. It was concluded the motor would need to be replaced and further investigation of the failed motor would need to be performed. Subsequently, CRACS "B" train was returned to operable status at 1608 EDT.

The likely cause of the motor failure is unknown at this time. However, the cause for the unplanned entry into LCO 3.0.5 was the unplanned motor failure in conjunction with the planned maintenance activity on EDG 1A-A. Prompt action was needed to preclude a 2 unit shutdown.

In addition, no avenues were available to restore the EDG from its scheduled maintenance activity prior to exceeding LCO 3.0.5 allowed outage time.

No recent events have been noted in regards to the MCR AHU motors.

3. *Information to show that the cause and proposed path to resolve the situation are understood by the licensee, such that there is a high likelihood that planned actions to resolve the situation can be completed within the proposed NOED time frame.*

At the time of the NOED request, the 1A-A EDG battery had been replaced with a new battery, but was still considered inoperable. The EDG battery was scheduled to be returned to service at 0900 on September 27, 2008. The return to service of the 1A-A EDG battery has been expedited to restore the EDG 1A-A operable within the proposed 36-hour timeframe.

If a loss of off-site power occurs, the EDG battery provides control power during the blackout period and field flash current for excitation during a EDG start. Prior to expiration of the time limit of LCO 3.0.5, the diesel battery was made available and was sufficiently charged to assure that the battery would perform its function in support of EDG 1A-A. A TVA calculation provides assurance that based on as-left battery charger value, adequate voltage would be available for devices to function properly.

B-B MCR AHU is inoperable due to an unanticipated failure of the motor. Maintenance work order 08-779987-000 was written and made Priority 1 to repair the B-B MCR AHU motor. Replacement of the motor and return to operable of the "B" CRACS train was expected to be within the proposed 36-hour timeframe. Subsequently, CRACS "B" train was returned to operable status at 1608 EDT.

4. *The safety basis for the request, including an evaluation of the safety significance and potential consequences of the proposed course of action.*

- a. *Provide the incremental conditional core damage probability (ICCDP) and incremental conditional large early release probability (ICLERP) associated with the period of enforcement discretion.*

From the SQN Revision 4 PRA model, the ICCDP was determined to be 5.0351E-08, which is much less than the 5.0E-07 threshold. The ICLERP was determined to be 2.2798E-9, which is below the threshold of 5.0E-08

- b. *Discuss the dominant risk contributors (cut sets/sequences) and summarize the risk insights for the plant-specific configuration the plant intends to operate in during the period of enforcement discretion.*

CRACS has no impact on the calculated core damage frequency (CDF) or LERF at SQN. CRACS and specifically the control room chillers are not included in the level one probabilistic risk assessment (PRA) model. From TVA calculation MDQ00003120020121, the time it takes the MCR to reach the 104°F environmental design temperature, from a normal temperature of 75°F, during a design basis LOCA is 18 hours (with outside temperatures at the design basis ambient temperature of 97°F). The relay and switchgear room adjacent to the MCR is also cooled by the CRACS. The relay room would not reach the design basis temperature of 104°F in a 24-hour time period on loss of cooling. Since this is a slowly evolving transient, this system has been screened out as either an initiating event or a support system failure. Also the plant can be maintained in hot standby from the remote shutdown facility, in the unlikely event that MCR conditions would necessitate abandonment.

With 1A-A EDG in maintenance, the largest contributor to CDF is the loss of off-site power (LOOP) initiating event; the top sequence being the loss of the B-train EDG resulting in a station blackout. Due to the fact that the 1A-A EDG is available, which was not accounted for in the PRA model runs, this risk analysis is conservative for the actual plant condition during the enforcement discretion period.

Additionally, the loss of off-site power would also result in the loss of power to the A train CRACS. However, it has been determined that the 1A-A EDG is available and could supply power to the A-A CRACS within the 18-hour timeframe mentioned above. The impact of the CRACS on the HRA actions in the PRA was reviewed. Specifically, the RAW values of the human actions in the PRA were reviewed and all of the HEPs with a RAW greater than 1.0 were assessed for long-term impact due to delayed room heat-up from CRACS. All of the dominant HEP contributors are short-term actions and would be completed significantly prior to the worst-case, 18-hour room heat-up described above.

- c. *Explain compensatory measures that will be taken to reduce the risk associated with the specified configuration.*

The following compensatory measures will be taken to reduce plant vulnerabilities to preclude event mitigation and initiating events during the period of the NOED:

1. Protect the CRACS "A" train and associated equipment.
2. Protect the off-site power source by deferring nonessential switchyard and transformer yard activities where human error could contribute to the likelihood of a loss of off-site power.
3. Verify breaker alignment in accordance with LCO 3.8.1.1, Surveillance Requirements 4.8.1.1.1.a.

4. Defer nonessential activities on each unit where human error could contribute to the likelihood of a plant transient and subsequent demand on mitigating systems.
 5. Nonessential surveillances or other maintenance activities on other risk significant equipment were deferred.
- d. *Discuss how the proposed compensatory measures are accounted for in the PRA. These modeled compensatory measures should be correlated, as applicable, to the dominant PRA sequences identified in item b above. In addition, other measures not directly related to the equipment out-of-service may also be implemented to reduce overall plant risk and, as such, should be explained. Compensatory measures that cannot be modeled in the PRA should be assessed qualitatively.*

The compensatory measures above were not accounted for in the PRA analysis performed for this NOED. Protection of the A train CRACS will increase the probability of maintaining the MCR environment. Protecting off-site power systems will reduce the possibility of a LOOP initiating event, reducing probability of the loss of power to A train CRACS. Since the compensatory measures are in direct relation to the equipment out-of-service, they should result in a significant risk reduction during the NOED period, such that the proposed NOED does not result in any net radiological increase to the public. .

- e. *Discuss the extent of condition of the failed or unavailable component(s) to other trains/divisions of equipment and what adjustments, if any, to the related PRA common cause factors have been made to account for potential increases in their failure probabilities. The method used to determine the extent of condition should be discussed. It is recognized that a formal root cause or apparent cause is not required given the limited time available in determining acceptability of a proposed NOED. However, a discussion of the likely cause should be provided with an associated discussion of the potential for common cause failure.*

No common cause failure modes of the CRACS were considered in the PRA analysis; therefore, no adjustments to the common cause analysis are required. The only common cause failure to be considered would be the failure of the MCR AHU motor on the A train unit. Since the A train AHU is in operation and the B train AHU motor failed on start-up, a common cause failure of the motor is unlikely.

EDG 1A-A was in maintenance and not failed, therefore no common cause failure due to the unavailability on this EDG is calculated. Common cause for the remaining EDGs was adjusted to a 3-component group in the risk analysis.

- f. *Discuss external event risk for the specified plant configuration. An example of external event risk is a situation where a reactor core isolation cooling (RCIC) pump has failed and a review of the licensee's Individual Plant Examination of External Events or full-scope PRA model identifies that the RCIC pump is used to mitigate certain fire scenarios. Action may be taken to reduce fire ignition frequency in the affected areas or reduce human error associated with time-critical operator actions in response to such scenarios.*

Review of the potential risk relative to fire safe shutdown identified only one known deficiency in the SQN fire detection system, and a continuous fire watch is in place to compensate. Only one SQN suppression system is currently unavailable, EDG CO₂ tank leak, an hourly fire watch is in place and operable hose stations in the area are

serving as backup suppression. The compensatory measures in place are adequate to prevent any increase in external event fire risk due to the discrepancies.

The EDGs and the MCR CRACS are designed to withstand a design basis earthquake. Since the 1A-A EDG has been determined to be available it could be manually started and supply power to the A train CRACS after a DBE within the 18 hour timelimit for the MCR to reach the environmental design temperature. Therefore, the increase in risk from an earthquake would be very small.

A review of the weather forecast for SQN during the period that the NOED would be in place did not indicate any severe weather (high winds, tornados, or flooding). Therefore the risk of additional external events is considered negligible.

- g. *Discuss forecasted weather conditions for the NOED period and any plant vulnerabilities related to weather conditions.*

No severe weather is forecasted for the period of the NOED that could cause a plant transient. The forecast for the period of the NOED request:

Mostly cloudy with a 20 percent of rain, with a high near 77 and lows around 60. North wind between 5 and 10 miles per hour becoming calm.

5. *The justification for the duration of the noncompliance.*

The requested 36-hour extension from the time TS LCO 3.0.5 was entered, which requires each unit to be in hot-standby, at 0655 on September 26, 2008, was viewed to be adequate for completing the restoration activities of the EDG 1A-A battery bank and for the unlikely event additional maintenance would be required of this battery bank.

6. *The condition and operational status of the plant (including safety-related equipment out of service or otherwise inoperable).*

Both SQN Units 1 and 2 are in Mode 1 at 100% power. The following safety-related equipment is inoperable:

- EDG 1A-A is inoperable due to the associated EDG battery being inoperable for a scheduled maintenance activity (replacement of all battery cells). Both Units entered TS LCO 3.8.1.1 Action (b) on 9/24/2008 at 1705. Currently, the new battery for EDG 1A-A is installed and has been recharged following a discharge test (which was completed satisfactorily). Based upon an evaluation by SQN Engineering, the battery was capable of performing its support function to start and flash the field of EDG 1A-A when the battery was untagged (on 9/26/2008 at 0507) following its discharge test. Therefore, EDG 1A-A would have been capable of performing its function during a loss of off-site power and was considered to be available.
- B-B MCR AHU is inoperable due to a failed motor. Both units entered TS LCO 3.7.15 Action (a) on 9/25/2008 at 2255. Additionally, both units entered LCO 3.0.5 due to the emergency power source to the redundant (Train A) MCR AHU being inoperable.
- Boric Acid Transfer Pump 1B-B is inoperable due to failing its Section XI pump performance test on 2/21/2008. This pump is part of the possible boration flow paths, which can be used to satisfy Technical Requirements Manual TR 3.1.2.2 for

Unit 1. No LCO entry is required for this component since redundant boration flowpaths from the Unit 1 refueling water storage tank are operable.

7. *The status and potential challenges to off-site and on-site power sources.*

As described above, EDG 1A-A is inoperable, but available. All other EDGs are operable and no activities are being conducted which could challenge operability of the remaining EDGs.

The off-site power sources for SQN Units 1 and 2 are operable. The off-site power grid is stable in a green risk status. The weather at SQN is currently partly cloudy with a 20 percent chance of rain. There are no high winds or storms forecast over the next 48 hours. There are no switchyard or grid activities being conducted that would threaten grid stability or off-site power source operability.

The 500 kilovolt (kV) to 161 kV intertie transformer located in the SQN switchyard is currently out-of-service for maintenance. This maintenance activity has been terminated until EDG 1A-A has been restored to operable status. Having this transformer out-of-service imposes more restrictive reactive load limits to assure acceptable off-site power voltage during an accident at SQN. These limits are being complied with and off-site power operability and stability are not affected.

8. *The basis for the licensee's conclusion that the noncompliance will not be of potential detriment to the public health and safety.*

The increase in allowed outage time of an additional 36 hours will not be a potential detriment to the health and safety of the public based on the following:

The EDG 1A-A was available (capable of performing its design function) prior to exceeding the LCO action time to perform its intended function. Hence the normal and emergency power supply was available to the A-A MCR AHU train during the 36-hour extension time.

Compensatory measures were in place to ensure no activities would take place that could affect the supporting systems and equipment, including off-site and on-site power sources, for the A-A MCR AHU train that could adversely affect risk during the 36-hour extension time.

In the unlikely event the A-A MCR AHU was lost, TVA evaluations have determined that the control room temperature rise from 75°F in the MCR takes at least 18 hours to reach 104°F in the MCR. As such, more than 18 hours exist before the MCR would become an uninhabitable environment and shutdown of both units can be accomplished from the backup control room. The backup control room is located outside the MCR and is supplied by a different air-conditioning system that was available during the 36-hour extension time.

There was no net increase in radiological risk to the public by avoiding the unnecessary transient imposed by compliance with LCO 3.0.5 and safety continued to be assured by the A-A MCR AHU, which was performing its intended function of maintaining control room temperature.

9. *The basis for the licensee's conclusion that the noncompliance will not involve adverse consequences to the environment.*

TVA has evaluated the NOED request against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. TVA has determined that the requested action meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9). This determination is based on the fact that the proposed action is being requested as an enforcement discretion to a license issued pursuant to 10 CFR 50, and that the change involves no significant hazards considerations. Although the proposed action involves noncompliance with the requirements of an LCO:

- i. The proposed action involves no significant hazards consideration.
- ii. There is no significant change in the types or a significant increase in the amounts of any effluent that may be released off-site, since the proposed action does not affect the generation of any radioactive effluent nor does it adversely affect any of the permitted release paths.
- iii. There is no significant increase in individual or cumulative occupational radiation exposure. The action proposed in this request for enforcement discretion will not affect plant radiation levels; therefore, does not adversely affect dose rates and occupational exposure.

Accordingly, the proposed action meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9).

10. *A statement that the request has been approved by the facility organization that normally reviews safety issues (Plant On-site Review Committee, or its equivalent).*

The basis for the request for enforcement discretion was reviewed and approved by the Plant Operations Review Committee on September 26, 2008.

11. *The request must specifically address which of the NOED criteria for appropriate plant conditions specified in Section B is satisfied and how it is satisfied.*

The enforcement discretion request meets NRC Inspection Manual, Part 9900: Section B, Paragraph 2.1, Criterion 1.a. This criterion applies to plants in power operation and is intended to avoid unnecessary transients as a result of compliance with the license condition and, thus, minimize potential safety consequences and operational risks. The safety consequences and operational risks for SQN were reviewed as part of this NOED request and are documented within this submittal.

12. *Unless otherwise agreed as discussed in Section B, a commitment is required from the licensee that the written NOED request will be submitted within 2 working days and the follow-up amendment will be submitted within 4 working days of verbally granting the NOED.*

This written NOED request meets the requirement for submitting the request within 2 working days of the NRC verbal approval (September 26, 2008). As agreed during oral NOED request teleconference, a follow-up license amendment is not needed.

- 13. *In addition to items 1-12 above, for severe weather NOED request the licensee must provide the following information.***

This proposed enforcement discretion is not in regards to a severe weather or nature phenomena-related emergency.