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ILLINOIS POWER COMPANY

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Document Control Desk
Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Interpretation Regarding Inoperability of Systems Providing a Support Function

Dear Sir:

Questions concerning the definition of OPERABLE - OPERABILITY, as it relates to support systems, have occasionally been raised by the utilities and addressed by the Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation (NRR).* The definition in the Clinton Power Station Technical Specifications, which Illinois Power Company (IP) believes is the same as what is currently and generally accepted throughout the industry, extends the OPERABILITY requirements for a system addressed by the Technical Specifications to include those components or systems which provide a support function and which may not be specifically addressed in the Technical Specifications.

As the requirements of a Limiting Condition for Operation (LCO) are extended to include the support system(s) or component(s), additional consideration must be given to how the ACTION requirements under a particular LCO should be applied to the support system(s) or component(s). In some cases, when a support system(s) or component(s) must be declared inoperable, it does not seem appropriate to take the ACTION(s) specified in the Technical Specifications for the supported system(s) when the ACTION requirement(s), including the specified out-of-service time(s) appears to be based on inoperability of the supported equipment itself and not necessarily on the inoperability or degradation of the supporting equipment.

IP has prepared the attached written interpretation, "Inoperability of Systems Providing a Support Function." This interpretation prescribes the means for complying with the operability requirements extended to support systems and for ensuring that the appropriate ACTIONs (including the allowed out-of-service times) are taken for support systems when they are declared inoperable. This interpretation addresses five systems that provide a support function for essential systems at Clinton and provides a specific interpretation for each.

* Ref: (1) NRC Letter from D. G. Eisenhut to All Power Reactor Licensees dated April 10, 1980;
(2) NRC Memorandum from D. M. Crutchfield to Distribution, "Technical Specification Operability Requirements," dated July 8, 1985.

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The purpose of this letter is to request the NRC to review IP's interpretation and provide concurrence or comments. IP would appreciate notification of NRR's position regarding this interpretation at the earliest possible time since it will impact the planning of maintenance to be performed on support systems and may therefore impact planning currently underway for the first refueling outage.

Sincerely yours,

D. L. Holtzscher
Acting Manager - Licensing and
Safety

TBE/kar

Attachment

cc: NRC Resident Office
NRC Region III, Regional Administrator
NRC Clinton Licensing Project Manager
Illinois Department of Nuclear Safety

INOPERABILITY OF SYSTEMS PROVIDING A SUPPORT FUNCTION

QUESTION/CONCERN

According to the definition of OPERABLE - OPERABILITY in the Technical Specifications (DEFINITION 1.27), "A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s) and when all necessary attendant instrumentation, controls, electric power, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s)."

This definition of OPERABILITY is worded such that it extends the OPERABILITY requirements for a particular system addressed by the Technical Specifications to include those components or systems which provide a support function and which may not be specifically addressed in the Technical Specifications. For example, there are no Limiting Conditions for Operation and Surveillance Requirements specified for the ECCS Equipment Cooling Ventilation System (VY) and Diesel Generator Room Ventilation (VD) systems although the systems which they support (ECCS and Emergency Onsite Electrical Power) are specifically addressed by the Technical Specifications (3.5.1/3.5.2 and 3.8.1.1/3.8.1.2 respectively). The same situation exists for the Switchgear Heat Removal Ventilation (VX) System and the Screenhouse and Makeup Water Pump House Ventilation (VH) System.

A question which has often been asked is, "What ACTION should be taken when a system or component which performs a support function is determined to be inoperable or rendered inoperable by performing testing or maintenance?"

Preliminary investigation suggests that it is not the intent of the Technical Specifications (i.e., the OPERABLE - OPERABILITY definition) to prohibit performing maintenance or testing on support systems during power operation. That is, consideration of Specification 3.0.3 should not be required if suitable ACTIONs and/or a limited out-of-service time can be established for a support system consistent with the Limiting Conditions for Operation specified in the Technical Specifications for the essential safety system supported by that system.

In some cases, when a support system(s) or component(s) is declared inoperable, it does not seem appropriate to take the ACTION(s) specified in the Technical Specifications for the supported essential system(s) when the ACTION requirement(s) or allowed out-of-service time(s) appears to be based on inoperability of the supported equipment itself and not necessarily on the inoperability or degradation of the supporting equipment. For example, if it is desired to perform maintenance on the VX system, which provides cooling to the switchgear and battery charger areas and the battery and inverter rooms, must the ACTION specified, say, for an inoperable battery charger (Technical Specification

3.8.2.1/3.8.2.2) be applied even though portions of the system could be maintained operable to support normal plant operation? The out-of-service time permitted for an inoperable battery charger is only 2 hours. This would probably not allow sufficient time to complete maintenance on the VX system before a plant shutdown would be required.

Another example where it is not clear which ACTIONs in the Technical Specifications associated with the different affected equipment should be taken, is when a Shutdown Service Water (SX) loop is declared inoperable. The ACTION statement in the Technical Specifications for the SX system requires declaring the associated diesel generator inoperable. When the LCO for the diesel generator(s) (Technical Specification 3.8.1.1) is entered and the ACTIONs are taken, ACTION "b" (or "d") requires starting and loading the diesel generator(s) in the other division(s). This seems inappropriate when it is known that the problem is in the SX system and not in the diesel generator itself. It would seem most appropriate to investigate the SX system, which would not necessarily require starting and loading the diesel generator(s). (In addition, starting and loading the other diesel generator(s) under normal plant conditions would not necessarily reveal a problem in the SX system since plant service water, and not SX water, is aligned to essential loads during normal plant conditions.)

INTERPRETATION

The following is extracted from an NRC letter dated April 10, 1980. This letter, which was issued to all reactor power licensees, effected a revision to the Standard Technical Specifications (STS) which incorporated the expanded definition of OPERABLE that now appears in the STS and the Clinton Technical Specifications.

> The NRC's Standard Technical Specifications (STS) were formulated to preserve the single failure criterion for systems that are relied upon in the safety analysis report. By and large, the single failure criterion is preserved by specifying Limiting Conditions for Operation (LCOs) that require all redundant components of safety related systems to be OPERABLE. When the required redundancy is not maintained, either due to equipment failure or maintenance outage, action is required, within a specified time, to change the operating mode of the plant to place it in a safe condition. The specified time to take action, usually called the equipment out-of-service time, is a temporary relaxation of the single failure criterion, which, consistent with overall system reliability considerations, provides a limited time to fix equipment or otherwise make it OPERABLE. If equipment can be returned to OPERABLE status within the specified time, plant shutdown is not required.
>
> LCOs are specified for each safety related system in the plant, and with few exceptions, the ACTION statements address single outages of components, trains or subsystems. For any particular system, the LCO does not address multiple outages of redundant components,

nor does it address the effects of outages of any support systems - such as electrical power or cooling water - that are relied upon to maintain the OPERABILITY of the particular system. This is because of the large number of combinations of these types of outages that are possible. Instead, the STS employ general specifications and an explicit definition of the term OPERABLE to encompass all such cases. These provisions have been formulated to assure that no set of equipment outages would be allowed to persist that would result in the facility being in an unprotected condition.

Another letter was issued by the NRC (dated July 8, 1985) to further address how the operability requirements for a particular system explicitly addressed by the Technical Specifications should be extended to those systems or components which perform a related support function. The following key points are extracted from that letter.

(1) The definition of operability extends the requirements of an LCO for those systems or components which directly perform a specified function to those which perform a related support function. Support functions are defined to include all necessary attendant instrumentation, controls, electric power, cooling or seal water, lubrication or other auxiliary equipment that is required to perform a supporting function.

(2) For many items that perform supporting functions, the Technical Specifications do not specify an LCO for these specific items. Therefore, a knowledge of the plant design bases is essential to the proper application of the Technical Specification operability requirements for items which perform as support functions.

(3) For the majority of the Technical Specifications, redundant systems or components are required to be operable to assure that the requirements of the single failure criterion are satisfied. When a system or component is inoperable, actions are required to restore the system or component to operable status within specified time limits or to place the plant in a mode or condition for which the LCO no longer applies. The requirements have been generally based on engineering judgment rather than specific event analysis.

(4) The Technical Specifications do allow exceptions to the requirements of the General Design Criteria (GDC) for limited periods of time. For example, systems or components are allowed to be out of service for testing or maintenance for specified time intervals. During such times the requirements of the single failure criterion as specified in the GDC for specific systems may not be satisfied.

In view of the guidance provided in these letters it is clear that no system or component which provides a support function should be removed from service or otherwise rendered inoperable without consideration of its impact on the essential supported system or equipment. Inoperability of the supporting equipment or system may or may not have

any immediate impact on the supported system or equipment during power operation or existing plant conditions but could impact operation of the supported system or equipment during accident conditions. In some cases it is difficult to predict how performance of the essential system would be affected or how long it could adequately perform its safety function under accident conditions with an inoperable or degraded supporting system or component.

The ACTION(s) specified under a particular LCO for an essential system provides an allowed out-of-service time (AOT) and/or compensatory measures that may be taken to permit continued plant operation for a limited period of time. The AOT and specified compensatory measures or actions however are based on the associated essential system itself being inoperable and not necessarily on the support system(s) alone being inoperable. Thus, although the LCO for an essential safety system must be extended to include the support system(s), some of the actions and AOTs specified in the ACTION statements for such systems in the Technical Specifications are not appropriate for situations when the inoperable condition may exist only in a support system(s). Additional interpretation is therefore needed to provide a means of complying with the operability requirements extended to support systems or components but also to ensure that appropriate ACTIONs and AOTs are implemented for such systems when they are rendered inoperable. The following five specific support systems are addressed:

I. Shutdown Service Water (SX) System
II. Switchgear Heat Removal (VX) Ventilation System
III. Diesel Generator Room Ventilation (VD) System
IV. Screenhouse and Makeup Water Pump House Ventilation (VH) System
V. ECCS Equipment Cooling (VY) Ventilation System.

The interpretation provided for each of these systems is based on concurrence and compliance with the intent of the noted NRC letters and the extended definition of OPERABILITY as it applies to support systems in that an "LCO will be entered" when applicable support systems are declared inoperable. In most cases, the interpretation supports the conclusion that the ACTIONs specified in the Technical Specifications for the supported essential system must be taken when the associated support system is declared inoperable. Special consideration however is given to the SX, VH and VD systems in that the ACTIONs required when the associated diesel generator is declared inoperable (due to the support system being declared inoperable) require additional clarification. The VX system is also given special consideration. If the VX system is declared inoperable, rather than enter an LCO specified in the Technical Specifications for each of the supported components or systems, the "LCO" that will be entered shall be administratively imposed according to the interpretation provided for the VX system. The "LCO" for the VX system will include the ACTIONs to be taken based on a review of the LCOs specified in the Technical Specifications for the affected systems addressed in the Technical Specifications. In all cases, the concerns

expressed in the noted NRC correspondence will be resolved because outages of support systems will be monitored and accounted for in accordance with or consistent with the Technical Specifications.

Each of the five support systems (SX, VX, VD, VH and VY) are addressed on the following pages. An interpretation prescribing the appropriate action to be taken when the applicable support system is declared inoperable is provided for each.

I. SX System (FSAR Section 9.2.1.2)

The SX, VD, VH, VY and VX systems may all be considered to be support systems. However, the SX system is specifically addressed by the Technical Specifications under Clinton Technical Specification 3.7.1.1, while the VD, VH, VY and VX systems do not have specific LCOs stated in the Technical Specifications. Specific ACTIONs under Specification 3.7.1.1 are therefore required when an SX loop(s) is declared inoperable. Interpretation is provided to address these specific ACTIONs and to ensure that other necessary and appropriate ACTIONs are taken.

The current ACTION under Clinton Technical Specification 3.7.1.1 reads as follows:

> With a shutdown service water loop(s) inoperable and with its associated system(s) or component(s) required to be OPERABLE, declare the associated system(s) or component(s) inoperable and take the ACTION required by Specification(s) 3.4.9.1, 3.4.9.2, 3.5.1, 3.5.2, 3.8.1.1, 3.8.1.2, 3.9.11.1, and 3.9.11.2, as applicable.

This ACTION statement thus refers to the ACTIONs specified under other LCOs systems (SX loads) which depend on SX to perform their safety function concurrent with a single failure such as a loss of offsite power. A comprehensive review of these ACTIONs and all of the SX system loads has verified the need to provide additional interpretation regarding (1) how the actions under the LCOs referred to under Technical Specification 3.7.1.1 should be fulfilled when entering those ACTIONs due only to an inoperable SX loop, and (2) what actions, in addition to those specifically referred to, should be taken when declaring all of "the associated system(s) or components(s) inoperable" as a result of an SX loop(s) being declared inoperable. This interpretation is provided as follows.

Interpretation

> With an SX loop (division) inoperable and with its associated system(s) or component(s) required to be OPERABLE, declare the associated system(s) or component(s) inoperable and take the ACTION(s) required under the noted LCOs as specified under Technical Specification 3.7.1.1, with the following clarification: When declaring the associated diesel generator inoperable in OPERATIONAL CONDITIONS 1, 2, 3, only certain ACTIONs under Technical Specification 3.8.1.1 will be required: Specifically, only ACTION "e" (for either Div I or II only) and part of either ACTION "b" or "d" will be required depending on which diesel generator (i.e., division) is inoperable. (Additional explanation is given below.) The remaining ACTIONS (a, c, f, g, h and i) should not apply for the condition of having only a single SX division or loop inoperable with no other concurrent inoperable

condition addressed by those ACTIONs existing.*

In addition to those ACTIONs, the following trains, systems or components should be declared inoperable so that the associated LCOs are entered and the corresponding ACTIONs are placed into effect:

System, Train or Component	Technical Specification LCO
Control Room Ventilation (VC) System(s)	3.7.2
Standby Gas Treatment (VG) System(s)	3.6.6.3
Hydrogen Recombiner (HG) Systems(s)	3.6.7.1
MSIV Leakage Control (IS) System Subsystem(s)	3.6.1.4

Action "e" (applicable when the diesel generator associated with either Div I or Div II only is declared inoperable) requires verifying, within 2 hours, that all required systems, subsystems, trains, components and devices that depend on the remaining OPERABLE diesel generator as a source of emergency power are also OPERABLE. This ACTION is appropriate because it ensures that the essential equipment required to mitigate the consequences of an accident associated with the other (operable) division is available to perform its safety function when the division associated with the inoperable SX subsystem is declared inoperable.

ACTION "b" (for Div I or II) or "d" (for Div III) requires (1) verifying correct breaker alignment and indicated power availability more frequently than usual, and (2) starting and loading the diesel generators in the other OPERABLE divisions (when a diesel is declared inoperable due to any cause other than preplanned preventive maintenance or testing). Performance of the first part of ACTION "b" (or "d") is required because it verifies that offsite power is available. IP's interpretation is that the latter part of this ACTION, however, is not required because it is not necessary to assume that an inoperable condition existing within the SX system constitutes a condition in which the OPERABILITY of the diesel generator(s) itself in another division must be verified.# It should be determined as soon as possible that the

* This interpretation does not specifically address situations in which more than one SX loop is inoperable or, for example, when an SX loop is inoperable concurrent with an inoperable AC electrical power source. Such situations must be considered on a case-by-case basis for which the guidance provided by this interpretation may or may not apply. In general, such concurrent inoperable conditions will require ACTION involving a much shorter AOT.

This interpretation applies to a problem discovered within the SX system such that an SX loop(s) had to be declared inoperable. It is already understood that preplanned preventive maintenance or testing performed on an SX or other support subsystem is equivalent to preplanned preventive maintenance or testing performed on the associated diesel generator(s) such that the starting and loading of the redundant OPERABLE diesel generator(s) otherwise required by ACTION "b" or "d" does not have to be performed.

problem is not a generic problem applicable to all of the SX loops, but this would not necessarily require starting and loading the diesel generators themselves. This interpretation is consistent with industry and NRC policy (Generic Letter 84-15) directed at reducing the risk and excessive wear caused by excessive and unnecessary diesel generator testing.

The additional ACTIONs required for the VC, VG, HG and IS systems are a necessary extension of the ACTION under Technical Specification 3.7.1.1 which states, "declare the associated system(s) or component(s) inoperable." It is appropriate to "enter an LCO" for each of these systems to ensure that their degraded condition is noted and accounted for. These systems (i.e., train or subsystem within the affected division) must be declared inoperable because, under accident conditions (concurrent with a loss of offsite power), the SX system supplies essential cooling water to the room coolers associated with these systems.

The room coolers provide adequate heat removal to limit the maximum temperatures in the affected rooms or areas to within acceptable limits. The room coolers along with the associated systems are identified as follows:

System	Equipment Description	EIN	Division
VC	Control Room HVAC System Chiller	0VC13A	I
VC	Control Room HVAC System Chiller	0VC13B	II
VG	SGTS Room 1A Coil Cabinet	0VG055A	I
VG	SGTS Room 1B Coil Cabinet	0VG055B	II
HG	Hydrogen Recombiner Room 1A Coil Cabinet	0VG075A	I
HG	Hydrogen Recombiner Room 1B Coil Cabinet	0VG075B	II
IS	MSIV-LCS Inboard Room Coil Cabinet	1VY09S	I
IS	MSIV-LCS Outboard Room Coil Cabinet	1VY10S	II

It should be noted that, consistent with the original intent of this Specification (3.7.1.1), the effect of the most limiting ACTION (under LCOs 3.5.1/3.5.2 and 3.8.1.1/3.8.1.2), out of all of the LCOs that apply, is to limit the out-of-service time for a single inoperable SX loop or division to 72 hours (before a plant shutdown is required) during OPERATIONAL CONDITIONS 1, 2, 3.

II. VX System (FSAR Section 9.4.5.2)

In accordance with the design basis, operability of the switchgear heat removal system (VX) is required for ensuring adequate heat removal to limit the maximum temperatures in the affected areas or rooms consistent with equipment ambient temperature ratings and requirements under normal or abnormal station conditions. The essential areas served by the VX system include the Div. 1, 2 and 3 switchgear areas, Div. 1, 2, 3 and 4 battery rooms, cable spreading rooms, and the Division 1, 2 and 4 inverter rooms.

For the switchgear cooling portion of the VX system, independent redundant cooling trains are provided for each of the three divisional switchgear areas. One train is non-safety related and has a coil supplied with cooling water from the plant chilled water system. The redundant safety-related train contains a direct expansion refrigeration unit supplied with cooling water from either the shutdown service water (SX) or plant service water (WS) system, depending on plant conditions, and has its own supply air distribution network. This train is utilized during abnormal (accident) conditions or upon failure of the non-safety related switchgear heat removal train.

A complete outage of a VX division during normal plant operation, in which both the safety-related and non-safety related switchgear heat removal trains would be out of service, would likely cause temperatures to rise to unacceptable levels in at least some of the affected rooms and would therefore not be permitted. The nonsafety train can be removed from service for an indefinite period of time with no Technical Specification ACTION required since the safety-related train provides the required cooling. However, a temporary outage of a safety-related train should be permitted to perform maintenance so long as normal temperatures can be maintained (by means of the non-safety train). A reasonable AOT should therefore be permitted during plant operation when it is evident that the non-safety portion of the system can maintain normal room temperature. Some of the affected rooms contain independent safety-related room coolers and therefore do not solely depend on the switchgear heat removal trains to maintain acceptable room temperatures.

Based on a review of the plant Technical Specifications and the equipment situated in the various rooms for which the VX system is associated, VX must be considered a support system for both the AC and DC power systems which are specifically addressed by Technical Specifications 3.8.1.1/3.8.1.2, 3.8.2.1/3.8.2.2 and 3.8.3.1/3.8.3.2. Of these LCOs, Specification 3.8.2.1/3.8.2.2, which specifies OPERABILITY requirements for DC sources (batteries/chargers), contains the most limiting ACTION: With a Div. I or II battery or charger inoperable, an AOT of only 2 hours is permitted.* This AOT is appropriate when the

*The basis for this severe AOT is described in Regulatory Guide 1.93, "Availability of Electric Power Sources." As noted in the BASES of the Technical Specifications (which refer to Reg. Guide 1.93), the OPERABILITY of the various power sources are based upon maintaining at least Div. I or II of the onsite AC and DC power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite AC source.

battery or charger itself within a particular division is inoperable, but it is unnecessarily restrictive when only the supporting safety-related switchgear heat removal train in that division is inoperable. Considering the fact that the safety-related portion of VX requires the SX and emergency power systems to be operable in order to perform its function, the AOT for a single safety-related switchgear train out of service should be no more restrictive than the AOT permitted for those systems. A review of the ACTIONS prescribed according to the LCOs for those systems (as discussed previously for SX) shows that 72 hours is permitted providing the other divisions and all of the essential equipment associated with the other divisions is OPERABLE.

To repeat, a 72-hour AOT will be allowed for any VX component or combination of VX components such that only one division of affected equipment is impacted at a time. However, if the impact of declaring an SX loop inoperable is considered, inoperability of the Division II SX loop simultaneously renders the VX safety-related coil cabinet for both the Division II and Division IV inverter rooms incapable of providing essential cooling during accident conditions concurrent with a loss of offsite power. This is due to the fact that both of these coil cabinets are supplied with emergency cooling water from the Division II SX loop. (Inoperability of either the SX Division I loop or the SX Division III loop does not result in a similar condition of having two coil cabinets for two different divisions of equipment inoperable at the same time.) An outage of the Division II SX loop thus seems contrary to the intent of allowing equipment within one division at a time to be impacted by an allowed VX outage.

Further consideration shows, however, that although an outage of the Division II SX loop may be considered a worst case condition, (because it impacts VX cooling capability for two divisions of equipment), its impact is not significantly worse than an outage of either of the other two SX divisions (I and III). This is because of the redundancy built into the design of the HPCS actuation logic, some of which is powered from the Division III Nuclear Systems Protection System (NSPS) buss, and some of which is powered from the Division IV NSPS buss.

Since automatic HPCS initiation can still be effected with Division IV NSPS power unavailable (assuming no additional failures), a loss of the Division IV inverter VX room cooler concurrent with a loss of the Division II inverter VX room cooler, due to an inoperable Division II SX division, will not result in a loss of the HPCS automatic initiation capability. That is, an outage of the Division II SX loop will not result in an outage of more than the associated Division II ECCS despite the impact on the VX system as discussed above.

In summary, it is appropriate to allow a single VX component or train to be inoperable for up to 72 hours (such that only a single division of equipment is affected) even though it is recognized that the 72-hour AOT also allowed for an SX loop (according to the Technical Specifications) can result in a degradation of VX cooling capability for more than one division of equipment. (The latter condition can only exist with respect to the SX Division II loop as discussed previously.)

Interpretation

In lieu of an allowed out-of-service time specified for the VX system in the Technical Specifications, Operation with an inoperable VX safety-related switchgear heat removal train or component is permitted for up to 72 hours provided that the affected room temperatures can continue to be maintained within acceptable limits and that only one division of equipment (cooled by the VX train or component) is affected at a time. (That is, for the special case discussed previously for the VX room coolers associated with the Division II and Division IV inverter rooms, emergency room cooling for the Division II and Division IV inverter rooms should be maintained operable to the extent that both coolers are not removed from service at the same time except as allowed for an outage of the SX system.)

If the system cannot be restored to operable status within 72 hours, the plant must be in HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the following 24 hours. Plant Operations will track the condition in the "LCO logbook" with an entry based on this interpretation in a manner equivalent to the Technical Specification LCOs.

It should be emphasized that a violation of this "LCO" ACTION, which is based on applicable Technical Specification LCOs (3.8.1.1/3.8.1.2, et. al.) that have been extended to include the VX system through the OPERABLE-OPERABILITY definition, constitutes a condition prohibited by the plant Technical Specifications and is reportable as such.

III. VD System (FSAR Section 9.4.5.1)

As described in the FSAR, the VD system is designed to operate under normal and abnormal conditions. During normal operating conditions a non-safety makeup ventilation system operates mainly to prevent the possible accumulation of oil fumes in the three diesel generator rooms and in the corresponding day tank and oil storage tank rooms. During accident conditions when the diesel generators are in operation, divisional ventilation fans operate automatically to limit the maximum temperature in each associated diesel generator room to 130°F in conformance with the diesel-generator equipment ratings.

During normal plant operation, outages of the nonsafety VD makeup system can be tolerated if room temperatures do not exceed the above noted temperatures. However, if the essential ventilation fan for a particular diesel generator is unavailable such that unacceptable room temperatures (130°F) could be attained during diesel operation, then it is appropriate to declare the diesel generator inoperable in a manner similar to when the associated SX loop is declared inoperable. Therefore, IP's position regarding inoperability of a safety-related essential VD ventilation fan is similar to that expressed for inoperability of an SX loop or division with respect to the ACTIONs required when declaring the associated diesel generator inoperable.

Interpretation

> When a diesel generator safety-related ventilation fan (1VD01CA, CB, CC) is declared inoperable, then the associated diesel generator must be declared inoperable and an "LCO will be entered" by Operations on the LCO log under Technical Specification 3.8.1.1/3.8.1.2 However, for OPERATIONAL CONDITIONS 1, 2, 3, only certain ACTIONs under Technical Specification 3.8.1.1 are required (for the same reasons as discussed for the SX system): Specifically, only ACTION "e" (for either Div. I or Div. II) and part of either ACTION "b" or "d" will be required depending on which diesel generator (i.e., division) is inoperable. (Additional explanation is given below.) The remaining ACTIONS (a, c, f, g, h and i) should not apply for the condition of having only a single divisional VD (safety-related) ventilation fan inoperable with no other concurrent inoperable condition addressed by those ACTIONs existing.

Action "e" (applicable to either Div. I or Div. II only) requires verifying, within 2 hours, that all required systems, subsystems, trains, components and devices that depend on the remaining OPERABLE diesel generator as a source of emergency power are also OPERABLE. This ACTION is appropriate because it ensures that the essential equipment required to mitigate the consequences of an accident associated with the other division is available to perform its safety function if the division associated with the inoperable diesel generator is rendered inoperable.

ACTION "b" (for Div I or II) or "d" (for Div III) requires (1) verifying correct breaker alignment and indicated power availability more frequently than usual, and (2) starting and loading the diesel generators in the other OPERABLE divisions (when a diesel is declared inoperable due to any cause other than preplanned preventive maintenance or testing). Performance of the first part of ACTION "b" (or "d") is required because it verifies that offsite power is available. IP's interpretation is that the latter part of this ACTION, however, is not required because it is not necessary to assume that an inoperable condition existing within the VD system constitutes a condition in which the OPERABILITY of the diesel generator(s) itself in another division must be verified.# It should be determined as soon as possible that the problem is not a generic problem applicable to all of the VD subsystems, but this would not necessarily require starting and loading the diesel generators themselves. This interpretation is consistent with industry and NRC policy (Generic Letter 84-15) directed at reducing the risk and excessive wear caused by excessive and unnecessary diesel generator testing.

This interpretation applies to a problem discovered within the VD system such that a VD subsystem had to be declared inoperable. It is already understood that preplanned preventive maintenance or testing performed on a VD or other support subsystem is equivalent to preplanned preventive maintenance or testing performed on the associated diesel generator(s) such that the starting and loading of the redundant OPERABLE diesel generator(s) otherwise required by ACTION "b" or "d" does not have to be performed.

IV. VH System (FSAR Section 9.4.5.4)

The VH system provides ventilation for the make up water pump house and the screenhouse. The nuclear safety-related part of the system provides room cooling for each of the three shutdown service water (SX) pumps. Each division or subsystem contains a cooling train capable of dissipating the heat produced by the operation of the corresponding pump and motor to limit the associated inside room temperature to 122°F. Each cooling train is powered from an essential safety bus serving the associated SX pump. A cooling coil associated with each cooling train is supplied by shutdown service water.

Inoperability of the cooling train associated with a particular SX pump could cause the ambient temperature within the room to exceed acceptable limits. Therefore the following interpretation is provided to address inoperability of this support system.

Interpretation

When a safety-related cooling train for a particular division of the VH system is made or declared inoperable, the associated SX loop must be declared inoperable and an LCO must be entered on the LCO logbook under Technical Specification 3.7.1.1. However, the ACTIONs under Specification 3.7.1.1 may be taken in accordance with the interpretation provided earlier for inoperability of an SX loop or division.

V. VY System (FSAR Section 9.4.5.3)

The ECCS Equipment Area Cooling (VY) System is designed such that a cooling train is provided for each ECCS equipment cubicle. Each cooling train is capable of dissipating the heat produced by the operation of the associated ECCS equipment and limiting the cubicle temperature to a maximum of 150°F and 90% relative humidity after a design basis accident. The cooling coils utilize either plant service water or shutdown service water depending on plant conditions. Although the VY system is designed such that it can be used during normal operating conditions, ventilation for the ECCS cubicles during normal conditions is provided by the fuel building HVAC system.

Inoperability of a cooling train associated with a particular ECCS cubicle could, during accident conditions, cause ambient cubicle temperatures to exceed acceptable limits. Therefore the following interpretation is provided to address inoperability of the VY support system.

Interpretation for Inoperability of the VY System

When a VY system cooling train is declared inoperable, the associated ECCS equipment must be declared inoperable and an LCO must be entered on the LCO logbook for Technical Specification 3.5.1/3.5.2. ACTION must be taken according to the plant Technical Specifications (3.5.1/3.5.2) for the associated inoperable ECCS.