DRAFT SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

TECHNICAL SPECIFICATIONS TASK FORCE TRAVELER

TSTF-541, REVISION 2

"ADD EXCEPTIONS TO SURVEILLANCE REQUIREMENTS FOR VALVES

AND DAMPERS LOCKED IN THE ACTUATED POSITION"

USING THE CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS

(EPID L-2019-PMP-0178)

## 1.0 INTRODUCTION

By letter dated August 28, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19240A315), the Technical Specifications Task Force (TSTF) submitted to the U.S. Nuclear Regulatory Commission (NRC) Traveler TSTF-541, Revision 2, "Add Exceptions to Surveillance Requirements for Valves and Dampers Locked in the Actuated Position." Traveler TSTF-541, Revision 2, proposes changes to the Standard Technical Specifications (STS) for Babcock & Wilcox (B&W), Westinghouse, Combustion Engineering (CE), and General Electric (GE) plant designs. These changes would be incorporated into future revisions of NUREG-1430, NUREG-1431, NUREG-1432, NUREG-1433, and NUREG-1434.[1] This traveler would be made available to licensees for adoption through the consolidated line item improvement process.

The proposed changes would revise certain Surveillance Requirements (SRs) in the STS by adding an exception to the SRs for automatic valves or dampers that are locked, sealed, or otherwise secured in the actuated position.

[1] U.S. Nuclear Regulatory Commission, "Standard Technical Specifications, Babcock and Wilcox Plants," NUREG-1430, Volume 1, "Specifications," and Volume 2, "Bases," Revision 4.0, April 2012 (ADAMS Accession Nos ML12100A177 and ML12100A178, respectively).

U.S. Nuclear Regulatory Commission, "Standard Technical Specifications, Westinghouse Plants," NUREG-1431, Volume 1, "Specifications," and Volume 2, "Bases," Revision 4.0, April 2012 (ADAMS Accession Nos. ML12100A222 and ML12100A228, respectively).

U.S. Nuclear Regulatory Commission, "Standard Technical Specifications, Combustion Engineering Plants," NUREG-1432, Volume 1, "Specifications," and Volume 2, "Bases," Revision 4.0, April 2012 (ADAMS Accession Nos. ML12102A165 and ML12102A169, respectively).

U.S. Nuclear Regulatory Commission, "Standard Technical Specifications, General Electric, BWR/4 Plants," NUREG-1433, Volume 1, "Specifications," and Volume 2, "Bases," Revision 4.0, April 2012 (ADAMS Accession Nos. ML12104A192 and ML12104A193, respectively).

U.S. Nuclear Regulatory Commission, "Standard Technical Specifications, General Electric BWR/6 Plants," NUREG-1434, Volume 1, "Specifications," and Volume 2, "Bases," Revision 4.0, April 2012 (ADAMS Accession Nos. ML12104A195 and ML12104A196, respectively).

1.1 Reason for the Proposed Change

As described in the Commission's "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" published in the *Federal Register* on July 22, 1993 (58 FR 39132), the NRC and industry task groups for new STS recommend that improvements include greater emphasis on human factors principles in order to add clarity and understanding to the text of the STS, and provide improvements to the Bases of STS, which provides the purpose for each requirement in the specification. The improved vendor-specific STS were developed and issued by the NRC in September 1992.

NUREG-1430 through 1434 contain the NRC staff's guidance for one method the NRC staff finds acceptable to comply with the requirements in Section 50.36 of Title 10 of the *Code of Federal Regulations* (10 CFR) for B&W, Westinghouse, CE, and GE plant designs. A defined term common to NUREG-1430 through 1434 is OPERABLE – OPERABILITY which means:

> A system, subsystem, [train/division], component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, [train/division], component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).

In the STSs, Limiting Conditions for Operation (LCOs) are generally expressed in statements such as "Two trains of the X System shall be OPERABLE." The OPERABLE – OPERABILITY definition is used to evaluate whether an LCO is met. To determine which systems, subsystems, trains/divisions, components, or devices might have their operability affected by a given structure, system, or component (SSC), knowledge of whether the SSC is required for the system, subsystem, train/division, component, or device to perform its specified safety function(s) is required.

STS LCO 3.0.1 through LCO 3.0.9 establish the rules of usage applicable to all Specifications and apply at all times, unless otherwise stated. STS LCO 3.0.2 establishes that upon discovery of a failure to meet an LCO, the associated Required Actions shall be met. The Required Actions establish those remedial measures that must be taken within specified Completion Times when the requirements of an LCO are not met.

The STS SRs 3.0.1 through 3.0.4 establish the rules of usage for SRs and apply at all times, unless otherwise stated. SR 3.0.1 establishes the requirement that SRs must be met during the MODES or other specified conditions in the Applicability for which the requirements of the LCO apply, unless otherwise specified in the individual SRs. This usage rule ensures that Surveillances are performed to verify the OPERABILITY of systems and components, and that variables are within specified limits. STS SR 3.0.1 states:

> SRs shall be met during the MODES or other specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3.

Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

For SRs lacking an explicit exception, the sentence “Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO,” requires that when an SR is not met, the LCO is not met. Per the usage rules, when an LCO is not met, Required Actions must be met within specified Completion Times.

For some cases, an individual SSC may not be capable of meeting an SR, but the system, subsystem, or train/division to which it belongs may still be capable of performing its specified safety function. In these cases, declaring the LCO not met may not be necessary because the system, subsystem, or train/division to which the SSC belongs may be OPERABLE. The current version of the STS contains explicit exceptions in the text of a limited number of SRs to avoid unnecessarily declaring the LCO not met when an SSC is not capable of meeting an SR but the system, subsystem, or train/division to which it belongs is still capable of performing its specified safety function.

The TSTF reviewed the STS and identified SRs that do not have explicit exceptions but for which exceptions would be appropriate to avoid unnecessary entry into Conditions and Required Actions. The TSTF proposed the changes described in Section 2.4 based on this review. The NRC staff deems the attempt to clarify its current guidance on acceptable methods to meet 10 CFR 50.36, given the situation created by current STS rules, worthwhile since the resulting clarification of a licensee’s licensing basis aligns with the intent of the Commission as discussed in the Final Policy Statement on TS Improvements for Nuclear Power Reactors. Specifically, one of the expectations for the implementation of the STS is to reduce action statement induced plant transients.

Since 2008, the TSTF and NRC staff have been collaborating to develop an acceptable approach to providing exceptions for the situation described above. By letter dated October 14, 2008 (ADAMS Accession No. ML082880503), the TSTF submitted TSTF-512, Revision 0, “Revise SR 3.0.3 to Address SRs that Cannot be Performed or are Not Met,” which proposed changes that the NRC staff found unacceptable, as documented in the staff’s letter dated May 1, 2009 (ADAMS Accession No. ML090230254). The initial revision of TSTF-541 (ADAMS Accession No. ML13253A390) was submitted for NRC staff review in 2013. Due to the lack of NRC staff resources during the response to Fukushima-related issues, the review was delayed until 2015. Upon review of the initial version of TSTF-541, the staff had questions regarding the acceptability of the approach. The NRC staff provided requests for additional information (RAIs) to the TSTF by letters dated August 13, 2015 (ADAMS Accession No. ML15208A287), and February 25, 2016 (ADAMS Accession No. ML16012A427). Revision 2 of TSTF-541 was developed based on TSTF and NRC staff interaction through a series of public meetings; the most recent of which was on February 21, 2019 (ADAMS Package Accession No. ML19056A435)

## 2.0 REGULATORY EVALUATION

### 2.1 System Descriptions

The STS use generic nomenclature for systems that may go by different names at an actual plant; however, regardless of the specific names, the functions of the systems are similar. The text below provides a high-level description of the systems affected by the proposed change as they are named in the respective STS.

For NUREG-1430, B&W Plants:

The spray additive system is a subsystem of the containment spray system that assists in reducing the iodine fission product inventory in the containment atmosphere resulting from a design-basis accident (DBA). In the event of an accident such as a loss-of-coolant accident (LOCA), the spray additive system will be automatically actuated upon a high containment pressure signal by the engineered safety features actuation system (ESFAS). The purpose of SR 3.6.7.4 is to verify that each automatic valve in the spray additive system flow path actuates to its correct position upon receipt of an actual or simulated actuation signal.

The emergency ventilation system (EVS) filters air from the area of the active emergency core cooling system (ECCS) components during the recirculation phase of a LOCA. Ductwork, valves or dampers, and instrumentation also form part of the system. During emergency operations, the EVS dampers are realigned, and fans are started to begin filtration. Upon receipt of the actuation signal(s), normal air discharges from the negative pressure area are isolated, and the stream of ventilation air discharges through the system filter trains. The prefilters remove any large particles in the air, and any entrained water droplets present, to prevent excessive loading of the high-efficiency particulate air (HEPA) filters and charcoal adsorbers. The purpose of SR 3.7.12.3 is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.7.12.5 is to ensure that the system is functioning properly by operating the EVS filter bypass damper.

The fuel storage pool ventilation system (FSPVS) provides negative pressure in the fuel storage area, and filters airborne radioactive particulates from the area of the fuel pool following a fuel handling accident. The FSPVS consists of portions of the normal fuel handling area ventilation system (FHAVS), the station EVS, ductwork bypasses, and dampers. The portion of the normal FHAVS used by the FSPVS consists of ducting between the spent fuel pool and the normal FHAVS exhaust fans or dampers, and redundant radiation detectors installed close to the suction end of the FHAVS exhaust fan ducting. The purpose of SR 3.7.13.3 is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.7.13.5 is to ensure that the system is functioning properly by operating the FSPVS filter bypass damper.

The control room emergency ventilation system (CREVS) provides a protected environment from which occupants can control the unit following an uncontrolled release of radioactivity, hazardous chemicals, or smoke. The purpose of SR 3.7.10.3 is to verify that each train/subsystem starts and operates on an actual or simulated actuation signal.

For NUREG-1431, Westinghouse Plants:

The control room emergency filtration system (CREFS) provides a protected environment from which occupants can control the unit following an uncontrolled release of radioactivity, hazardous chemicals, or smoke. The purpose of SR 3.7.10.3 is to verify that each train/subsystem starts and operates on an actual or simulated actuation signal.

The shield building air cleanup system (SBACS) is required to ensure that radioactive materials that leak from the primary containment into the shield building (secondary containment) following a DBA are filtered and adsorbed prior to exhausting to the environment. The containment has a secondary containment called the shield building, which is a concrete structure that surrounds the steel primary containment vessel. Between the containment vessel and the shield building inner wall is an annular space that collects any containment leakage that may occur following a LOCA. The SBACS establishes a negative pressure in the annulus between the shield building and the steel containment vessel. Filters in the system then control the release of radioactive contaminants to the environment. The SBACS consists of two separate and redundant trains. Each train includes a heater, cooling coils, a prefilter, moisture separators, a HEPA filter, an activated charcoal adsorber section for removal of radioiodine, and a fan. Ductwork, valves and/or dampers, and instrumentation also form part of the system. The system initiates and maintains a negative air pressure in the shield building by means of filtered exhaust ventilation of the shield building following receipt of a safety injection signal. The purpose of SR 3.6.13.3 is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.6.13.4 is to ensure that the system is functioning properly by operating the filter bypass damper.

The iodine cleanup system (ICS) is provided to reduce the concentration of fission products released to the containment atmosphere following a postulated accident. The ICS would function together with the containment spray and cooling systems following a DBA to reduce the potential release of radioactive material, principally iodine, from the containment to the environment. The ICS consists of two 100-percent capacity, separate, independent, and redundant trains. Each train includes a heater, cooling coils, a prefilter, a demister, a HEPA filter, an activated charcoal adsorber section for removal of radioiodine, and a fan. Ductwork, valves and/or dampers, and instrumentation also form part of the system. The system initiates filtered recirculation of the containment atmosphere following receipt of a safety injection signal. The purpose of SR 3.6.11.3 is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.6.11.4 is to ensure that the system is functioning properly by operating the ICS filter bypass damper.

The emergency core cooling system pump room exhaust air cleanup system (ECCS PREACS), in conjunction with other normally operating systems, also provides environmental control of temperature and humidity in the ECCS pump room area and the lower reaches of the auxiliary building. Ductwork, valves or dampers, and instrumentation also form part of the system, as well as demisters functioning to reduce the relative humidity of the air stream. During emergency operations, the ECCS PREACS dampers are realigned, and fans are started to begin filtration. Upon receipt of the actuating ESFAS signal(s), normal air discharges from the ECCS pump room isolate, and the stream of ventilation air discharges through the system filter trains. The prefilters or demisters remove any large particles in the air, and any entrained water droplets present, to prevent excessive loading of the HEPA filters and charcoal adsorbers. The purpose of SR 3.7.12.3 is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.7.12.5 is to ensure that the system is functioning properly by operating the ECCS PREACS filter bypass damper.

The fuel building air cleanup system (FBACS) filters airborne radioactive particulates from the area of the fuel pool following a fuel handling accident or LOCA. The FBACS, in conjunction with other normally operating systems, also provides environmental control of temperature and humidity in the fuel pool area. The FBACS consists of two independent and redundant trains. Each train consists of a heater, a prefilter or demister, a HEPA filter, an activated charcoal adsorber section for removal of gaseous activity (principally iodines), and a fan. Ductwork, valves or dampers, and instrumentation also form part of the system, as well as demisters, functioning to reduce the relative humidity of the airstream. The system initiates filtered ventilation of the fuel handling building following receipt of a high-radiation signal. The FBACS is a standby system, parts of which may also be operated during normal plant operations. Upon receipt of the actuating signal, normal air discharges from the building, the fuel handling building is isolated, and the stream of ventilation air discharges through the system filter trains. The purpose of SR 3.7.13.3 is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.7.13.5 is to ensure that the system is functioning properly by operating the FBACS filter bypass damper.

The penetration room exhaust air cleanup system (PREACS) filters air from the penetration area between containment and the auxiliary building. The PREACS consists of two independent and redundant trains. Each train consists of a heater, a prefilter or demister, a HEPA filter, an activated charcoal adsorber section for removal of gaseous activity (principally iodines), and a fan. Ductwork, valves or dampers, and instrumentation, as well as demisters, functioning to reduce the relative humidity of the air stream, also form part of the system. The PREACS is a standby system, parts of which may also operate during normal unit operations. Upon receipt of the actuating signal(s), the PREACS dampers are realigned and fans are started to initiate filtration. The purpose of SR 3.7.14.3 is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.7.14.5 is to ensure that the system is functioning properly by operating the PREACS filter bypass damper.

For NUREG-1432, CE Plants:

The control room emergency air cleanup system (CREACS) provides a protected environment from which occupants can control the unit following an uncontrolled release of radioactivity, hazardous chemicals, or smoke. The purpose of SR 3.7.11.3 is to verify that each train/subsystem starts and operates on an actual or simulated actuation signal.

The shield building exhaust air cleanup system (SBEACS) is required to ensure that radioactive materials that leak from the primary containment into the shield building (secondary containment) following a DBA are filtered and adsorbed prior to exhausting to the environment. The containment has a secondary containment called the shield building, which is a concrete structure that surrounds the steel primary containment vessel. Between the containment vessel and the shield building inner wall is an annular space that collects any containment leakage that may occur following a LOCA. The SBEACS establishes a negative pressure in the annulus between the shield building and the steel containment vessel. Filters in the system then control the release of radioactive contaminants to the environment. The SBEACS consists of two separate and redundant trains. Each train includes a heater, cooling coils, a prefilter, moisture separators, a HEPA filter, an activated charcoal adsorber section for removal of radioiodine, and a fan. Ductwork, valves and/or dampers, and instrumentation also form part of the system. The system initiates and maintains a negative air pressure in the shield building by means of filtered exhaust ventilation of the shield building following receipt of a safety injection signal. The purpose of SR 3.6.8.3 is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.6.8.4 is to ensure that the system is functioning properly by operating the filter bypass damper.

The ICS is provided to reduce the concentration of fission products released to the containment atmosphere following a postulated accident. The ICS would function together with the containment spray and cooling systems following a DBA to reduce the potential release of radioactive material, principally iodine, from the containment to the environment. The ICS consists of two 100-percent capacity, separate, independent, and redundant trains. Each train includes a heater, cooling coils, a prefilter, a demister, a HEPA filter, an activated charcoal adsorber section for removal of radioiodine, and a fan. Ductwork, valves and/or dampers, and instrumentation also form part of the system. The system initiates filtered recirculation of the containment atmosphere following receipt of a containment isolation actuation signal. The purpose of SR 3.6.10.3 is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.6.10.4 is to ensure that the system is functioning properly by operating the ICS filter bypass damper.

The ECCS PREACS, in conjunction with other normally operating systems, also provides environmental control of temperature and humidity in the ECCS pump room area and the lower reaches of the auxiliary building. Ductwork, valves or dampers, and instrumentation also form part of the system, as well as demisters functioning to reduce the relative humidity of the air stream. During emergency operations, the ECCS PREACS dampers are realigned, and fans are started to begin filtration. Upon receipt of the actuating ESFAS signal(s), normal air discharges from the ECCS pump room isolate, and the stream of ventilation air discharges through the system filter trains. The prefilters or demisters remove any large particles in the air, and any entrained water droplets present, to prevent excessive loading of the HEPA filters and charcoal adsorbers. The purpose of SR 3.7.13.3 is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.7.13.5 is to ensure that the system is functioning properly by operating the ECCS PREACS filter bypass damper.

The FBACS filters airborne radioactive particulates from the area of the fuel pool following a fuel handling accident or LOCA. The FBACS, in conjunction with other normally operating systems, also provides environmental control of temperature and humidity in the fuel pool area. The FBACS consists of two independent and redundant trains. Each train consists of a heater, a prefilter or demister, a HEPA filter, an activated charcoal adsorber section for removal of gaseous activity (principally iodines), and a fan. Ductwork, valves or dampers, and instrumentation also form part of the system, as well as demisters, functioning to reduce the relative humidity of the airstream. The system initiates filtered ventilation of the fuel handling building following receipt of a high-radiation signal. The FBACS is a standby system, parts of which may also be operated during normal plant operations. Upon receipt of the actuating signal, normal air discharges from the building, the fuel handling building is isolated, and the stream of ventilation air discharges through the system filter trains. The purpose of SR 3.7.14.3 is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.7.14.5 is to ensure that the system is functioning properly by operating the FBACS filter bypass damper.

The PREACS filters air from the penetration area between containment and the auxiliary building. The PREACS consists of two independent and redundant trains. Each train consists of a heater, a prefilter or demister, a HEPA filter, an activated charcoal adsorber section for removal of gaseous activity (principally iodines), and a fan. Ductwork, valves or dampers, and instrumentation, as well as demisters, functioning to reduce the relative humidity of the air stream, also form part of the system. The PREACS is a standby system, parts of which may also operate during normal unit operations. Upon receipt of the actuating signal(s), the PREACS dampers are realigned and fans are started to initiate filtration. The purpose of SR 3.7.15.3 is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.7.15.5 is to ensure that the system is functioning properly by operating the PREACS filter bypass damper.

The essential chilled water (ECW) system provides a heat sink for the removal of process and operating heat from selected safety-related air handling systems during a DBA or transient. The ECW system is a closed-loop system consisting of two independent trains. Each 100-percent capacity train includes a heat exchanger, surge tank, pump, chemical addition tank, piping, valves, controls, and instrumentation. An independent 100-percent capacity chilled water refrigeration unit cools each train. The ECW system is actuated on a safety injection actuation signal and supplies chilled water to the heating, ventilation, and air conditioning units in engineered safety feature equipment areas (e.g., the main control room, electrical equipment room, and safety injection pump area). The purpose of SR 3.7.10.2 is to verify proper automatic operation of the ECW system components and that the ECW pumps will start in the event of any accident or transient that generates a safety injection actuation signal. This SR also ensures that each automatic valve in the flow paths actuates to its correct position on an actual or simulated safety injection actuation signal.

For NUREG-1433, GE BWR/4 Plants:

The main control room environmental control (MCREC) provides a protected environment from which occupants can control the unit following an uncontrolled release of radioactivity, hazardous chemicals, or smoke. The purpose of SR 3.7.4.3 is to verify that each train/subsystem starts and operates on an actual or simulated actuation signal.

The ECCS is designed to limit the release of radioactive materials to the environment following a LOCA and consists of the high-pressure coolant injection system, the core spray system, the low-pressure coolant injection mode of the residual heat removal (RHR) system, and the automatic depressurization system. The purpose of SR 3.5.1.10 is to verify the automatic initiation logic of high-pressure coolant injection, core spray, and low-pressure coolant injection will cause the systems or subsystems to operate as designed, including actuation of the system throughout its emergency operating sequence, automatic pump startup, and actuation of all automatic valves to their required positions on receipt of an actual or simulated actuation signal.

The function of the reactor core isolation cooling (RCIC) system is to respond to transient events by providing makeup coolant to the reactor. The purpose of SR 3.5.3.5 is to verify the system operates as designed, including actuation of the system throughout its emergency operating sequence; that is, automatic pump startup and actuation of all automatic valves to their required positions on receipt of an actual or simulated actuation signal.

The plant service water (PSW) system and ultimate heat sink are designed to provide cooling water for the removal of heat from equipment, such as the diesel generators, RHR pump coolers and heat exchangers, and room coolers for ECCS equipment, required for a safe reactor shutdown following a DBA or transient. The PSW system also provides cooling to unit components, as required, during normal shutdown and reactor isolation modes. During a DBA, the equipment required only for normal operation is isolated and cooling is directed to only safety-related equipment. The purpose of SR 3.7.2.6 is to verify the systems will automatically switch to the position to provide cooling water exclusively to safety-related equipment during an accident.

The function of the standby gas treatment (SGT) system is to ensure that radioactive materials that leak from the primary containment into the secondary containment following a DBA are filtered and adsorbed prior to exhausting to the environment. The purpose of SR 3.6.4.3.3 is to verify that each SGT subsystem starts on receipt of an actual or simulated initiation signal. The purpose of SR 3.6.4.3.4 is to verify that the filter cooler bypass damper can be opened, and the fan started. This ensures that the ventilation mode of SGT system operation is available.

For NUREG-1434, GE BWR/6 Plants:

The control room fresh air (CRFA) system provides a protected environment from which occupants can control the unit following an uncontrolled release of radioactivity, hazardous chemicals, or smoke. The purpose of SR 3.7.3.3 is to verify that each train/subsystem starts and operates on an actual or simulated actuation signal.

The ECCS is designed to limit the release of radioactive materials to the environment following a LOCA and consists of the high-pressure core spray (HPCS) system, the low-pressure core spray system, the low pressure coolant injection mode of the RHR system, and the automatic depressurization system. The purpose of SR 3.5.1.5 is to verify the automatic initiation logic of HPCS, low pressure core spray, and low-pressure coolant injection will cause the systems or subsystems to operate as designed, including actuation of the system throughout its emergency operating sequence, automatic pump startup, and actuation of all automatic valves to their required positions on receipt of an actual or simulated actuation signal.

The function of the RCIC system is to respond to transient events by providing makeup coolant to the reactor. The purpose of SR 3.5.3.5 is to verify the system operates as designed, including actuation of the system throughout its emergency operating sequence; that is, automatic pump startup and actuation of all automatic valves to their required positions on receipt of an actual or simulated actuation signal.

The standby service water (SSW) system and ultimate heat sink are designed to provide cooling water for the removal of heat from equipment, such as the diesel generators, RHR pump coolers and heat exchangers, and room coolers for ECCS equipment, required for a safe reactor shutdown following a DBA or transient. The SSW system also provides cooling to unit components, as required, during normal shutdown and reactor isolation modes. During a DBA, the equipment required only for normal operation is isolated and cooling is directed to only safety-related equipment. The purpose of SR 3.7.1.6 is to verify the systems will automatically switch to the position to provide cooling water exclusively to safety-related equipment during an accident.

The RHR containment spray system is designed to mitigate the effects of primary containment bypass leakage and low energy line breaks. The purpose of SR 3.6.1.7.3 is to verify that each RHR containment spray subsystem automatic valve actuates to its correct position upon receipt of an actual or simulated automatic actuation signal.

The function of the SGT system is to ensure that radioactive materials that leak from the primary containment into the secondary containment following a DBA are filtered and adsorbed prior to exhausting to the environment. The purpose of SR 3.6.4.3.3 is to verify that each SGT subsystem starts on receipt of an actual or simulated initiation signal. The purpose of SR 3.6.4.3.4 is to verify that the filter cooler bypass damper can be opened, and the fan started. This ensures that the ventilation mode of SGT system operation is available.

The high-pressure core spray service water system (HPCS SWS) provides cooling water for the removal of heat from components of the Division 3 HPCS system. The purpose of SR 3.7.2.3 is to verify that the automatic valves of the HPCS SWS will automatically switch to the safety or emergency position to provide cooling water exclusively to the safety related equipment on an actual or simulated initiation signal.

2.2 Proposed Changes to the Standard Technical Specifications

The proposed changes to the STS would revise certain SRs by adding exceptions to the SR for automatic valves or dampers that are locked, sealed or otherwise secured in the actuated position.

The following list denotes the proposed changes to the SRs for all plant designs (B&W, Westinghouse, CE, and GE plants, NUREG-1430 through NUREG-1434, respectively). The proposed new text containing the exception is shown in *italics*.

For NUREG-1430:

SR 3.6.7.4 "Verify each spray additive automatic valve in the flow path actuates to the correct position on an actual or simulated actuation signal*, except for valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.7.10.3 "Verify [each CREVS train actuates] [or the control room isolates] on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.7.12.3, "Verify each EVS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.7.12.5 "Verify each EVS filter cooling bypass damper can be opened*, except for dampers that are locked, sealed, or otherwise secured in the open position*."

SR 3.7.13.3 "Verify each FSPVS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.7.13.5 "Verify each FSPVS filter bypass damper can be opened*, except for dampers that are locked, sealed, or otherwise secured in the open position*."

For NUREG-1431:

SR 3.6.11.3 "Verify each ICS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.6.11.4 "Verify each ICS filter bypass damper can be opened*, except for dampers that are locked, sealed, or otherwise secured in the open position*."

SR 3.6.13.3 "Verify each SBACS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.6.13.4 "Verify each SBACS filter bypass damper can be opened*, except for dampers that are locked, sealed, or otherwise secured in the open position*."

SR 3.7.10.3 "Verify each CREFS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.7.12.3 "Verify each ECCS PREACS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.7.12.5 "Verify each ECCS PREACS filter bypass damper can be closed*, except for dampers that are locked, sealed, or otherwise secured in the closed position*."

SR 3.7.13.3 "Verify each FBACS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.7.13.5 "Verify each FBACS filter bypass damper can be closed*, except for dampers that are locked, sealed, or otherwise secured in the closed position*."

SR 3.7.14.3 "Verify each PREACS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.7.14.5 "Verify each PREACS filter bypass damper can be closed*, except for dampers that are locked, sealed, or otherwise secured in the closed position*."

For NUREG-1432:

SR 3.6.8.3 "Verify each SBEACS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.6.8.4 "Verify each SBEACS filter bypass damper can be opened*, except for dampers that are locked, sealed, or otherwise secured in the open position*."

SR 3.6.10.3 "Verify each ICS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.6.10.4 "Verify each ICS filter bypass damper can be opened*, except for dampers that are locked, sealed, or otherwise secured in the open position*."

SR 3.7.10.2 "Verify the proper actuation of each ECW System component on an actual or simulated actuation signal*, except for valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.7.11.3 "Verify each CREACS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*."

SR 3.7.13.3 “Verify each ECCS PREACS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*.”

SR 3.7.13.5 “Verify each ECCS PREACS filter bypass damper can be opened*, except for dampers that are locked, sealed, or otherwise secured in the open position*.”

SR 3.7.14.3 “Verify each FBACS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*.”

SR 3.7.14.5 “Verify each FBACS filter bypass damper can be opened*, except for dampers that are locked, sealed, or otherwise secured in the open position*.”

SR 3.7.15.3 “Verify each PREACS train actuates on an actual or simulated actuation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*.”

SR 3.7.15.5 “Verify each PREACS filter bypass damper can be opened*, except for dampers that are locked, sealed, or otherwise secured in the open position*.”

For NUREG-1433:

SR 3.5.1.10 “Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal*, except for valves that are locked, sealed, or otherwise secured in the actuated position*.”

SR 3.5.3.5 “Verify the RCIC System actuates on an actual or simulated automatic initiation signal*, except for valves that are locked, sealed, or otherwise secured in the actuated position*.”

SR 3.6.4.3.3 “Verify each SGT subsystem actuates on an actual or simulated initiation signal*, except for dampers that are locked, sealed, or otherwise secured in the actuated position*.”

SR 3.6.4.3.4 “Verify each SGT filter cooler bypass damper can be opened and the fan started*, except for dampers that are locked, sealed, or otherwise secured in the open position*.”

SR 3.7.2.6 “Verify each [PSW] subsystem actuates on an actual or simulated initiation signal*, except for valves that are locked, sealed, or otherwise secured in the actuated position*.”

SR 3.7.4.3 “Verify each [MCREC] subsystem actuates on an actual or simulated initiation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*.”

For NUREG-1434:

> SR 3.5.1.5 "Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal*, except for valves that are locked, sealed, or otherwise secured in the actuated position*."

> SR 3.5.3.5 "Verify the RCIC System actuates on an actual or simulated automatic initiation signal*, except for valves that are locked, sealed, or otherwise secured in the actuated position*."

> SR 3.6.1.7.3 "Verify each RHR containment spray subsystem automatic valve in the flow path actuates to its correct position on an actual or simulated automatic initiation signal*, except for valves that are locked, sealed, or otherwise secured in the actuated position*."

> SR 3.6.4.3.3 "Verify each SGT subsystem actuates on an actual or simulated initiation signal*, except for dampers that are locked, sealed, or otherwise secured in the actuated position*."

> SR 3.6.4.3.4 "Verify each SGT filter cooler bypass damper can be opened and the fan started*, except for dampers that are locked, sealed, or otherwise secured in the open position*."

> SR 3.7.1.6 "Verify each [SSW] subsystem actuates on an actual or simulated initiation signal*, except for valves that are locked, sealed, or otherwise secured in the actuated position*."

> SR 3.7.2.3 "Verify the HPCS SWS actuates on an actual or simulated initiation signal*, except for valves that are locked, sealed, or otherwise secured in the actuated position*."

> SR 3.7.3.3 "Verify each [CRFA] subsystem actuates on an actual or simulated initiation signal*, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position*."

In Volume 2 of each NUREG, where the reason for each particular SR is described, the following text would be added:

> The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.

The traveler would also correct errors in the descriptions of the reasons for NUREG-1430, SR 3.7.12.5; NUREG-1432, SR 3.7.13.5; NUREG-1432, SR 3.7.14.5; and NUREG-1432, SR 3.7.15.5 in Volume 2 of each respective NUREG. The descriptions erroneously state that operability is verified if the damper can be closed. The description should state operability is verified if the damper can be opened.

## 2.3 Applicable Regulatory Requirements and Guidance

Section IV, "The Commission Policy," of the Final Policy Statement on TS Improvements for Nuclear Power Reactors states, in part:

> The purpose of Technical Specifications is to impose those conditions or limitations upon reactor operation necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety by identifying those features that are of controlling importance to safety and establishing on them certain conditions of operation which cannot be changed without prior Commission approval.
>
> …[T]he Commission will also entertain requests to adopt portions of the improved STS [(e.g., TSTF-541)], even if the licensee does not adopt all STS improvements. …The Commission encourages all licensees who submit Technical Specification related submittals based on this Policy Statement to emphasize human factors principles.
>
> …In accordance with this Policy Statement, improved STS have been developed and will be maintained for each NSSS [nuclear steam supply system] owners group. The Commission encourages licensees to use the improved STS as the basis for plant-specific Technical Specifications. …[I]t is the Commission intent that the wording and Bases of the improved STS be used …to the extent practicable.

The Summary section of the Final Policy Statement on TS Improvements for Nuclear Power Reactors states, in part:

> Implementation of the Policy Statement through implementation of the improved STS is expected to produce an improvement in the safety of nuclear power plants through the use of more operator-oriented Technical Specifications, Improved Technical Specification Bases, reduced action statement induced plant transients, and more efficient use of NRC and industry resources.

The regulation under 10 CFR 50.36(a)(1) requires that:

> Each applicant for a license authorizing operation of a production or utilization facility shall include in his application proposed technical specifications in accordance with the requirements of this section. A summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the application, but shall not become part of the technical specifications.

The regulation under 10 CFR 50.36(b) requires that:

> Each license authorizing operation of a …utilization facility …will include technical specifications. The technical specifications will be derived from the analyses and evaluation included in the safety analysis report, and amendments thereto, submitted pursuant to [10 CFR] 50.34 [“Contents of applications; technical information”]. The Commission may include such additional technical specifications as the Commission finds appropriate.

The categories of items required to be in the TS are listed in 10 CFR 50.36(c).

The regulation under 10 CFR 50.36(c)(2) states that LCOs “are the lowest functional capability or performance levels of equipment required for safe operation of the facility.” The regulation requires that when an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TS until the condition can be met.

SRs are defined in 10 CFR 50.36(c)(3) as “requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.”

The regulation under 10 CFR 50.36(c)(5) requires TS to include administrative controls, which “are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner.”

The regulation under 10 CFR 50.59, “Changes, tests, and experiments,” contains requirements for the process by which licensees, under certain conditions, may make changes to their facilities and procedures as described in the Final Safety Analysis Report (FSAR) (as updated), without prior NRC approval. The process requires licensees to request a license amendment via 10 CFR 50.90 for any change that would require NRC approval.

Section 10 CFR 50.65, “Requirements for monitoring the effectiveness of maintenance at nuclear power plants,” requires licensees to monitor the performance or condition of SSCs, against licensee-established goals, in a manner sufficient to provide reasonable assurance that these SSCs, as defined in paragraph (b) of this section, are capable of fulfilling their intended functions.

The regulation under 10 CFR 50.65(a)(4) states:

> Before performing maintenance activities (including but not limited to surveillance, post-maintenance testing, and corrective and preventive maintenance), the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities. The scope of the assessment may be limited to structures, systems, and components that a risk-informed evaluation process has shown to be significant to public health and safety.

The regulation under 10 CFR 50.65(b) states:

> The scope of the monitoring program specified in paragraph (a)(1) of this section shall include safety related and nonsafety related structures, systems, and components, as follows:
>
> (1) Safety-related structures, systems and components that are relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, or the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposure comparable to the guidelines in [10 CFR] 50.34(a)(1), [10 CFR] 50.67(b)(2), or [10 CFR] 100.11 of this chapter, as applicable.
>
> (2) Nonsafety related structures, systems, or components:
>
> (i) That are relied upon to mitigate accidents or transients or are used in plant emergency operating procedures (EOPs); or
>
> (ii) Whose failure could prevent safety-related structures, systems, and components from fulfilling their safety-related function; or
>
> (iii) Whose failure could cause a reactor scram or actuation of a safety-related system.

Appendix B, “Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants,” to 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities,” establishes quality assurance requirements for the operation of nuclear power plant safety-related SSCs.

NRC Regulatory Guide (RG) 1.33, Revision 2, “Quality Assurance Program Requirements (Operation),” with Appendix A, “Typical Procedures for Pressurized Water Reactors and Boiling Water Reactors,” dated February 1978 (ADAMS Accession No. ML003739995), describes a method acceptable to the NRC staff for complying with the Commission’s regulations with regard to overall quality assurance program requirements for the operation phase of nuclear power plants. Section 8.b of RG 1.33, Appendix A, states that “implementing procedures are required for each surveillance test, inspection, or calibration listed in the technical specifications.” Section 9.e of RG 1.33, Appendix A, states that “General procedures for the control of maintenance, repair, replacement, and modification work should be prepared before reactor operation is begun.” Section 9.e.1 states that the procedures should include information such as methods for obtaining permission and clearance for operation personnel to work and for logging such work.

STS 5.4.1.a in the Administrative Controls section of NUREG-1430 through 1434 contains requirements that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in RG 1.33, Revision 2, Appendix A, February 1978.

STS 5.5.11/5.5.8, “Ventilation Filter Testing Program (VFTP),” in the Administrative Controls section of NUREG-1430 through 1434 contains requirements to identify any filter degradation and ensures the ability of the filters to perform in a manner consistent with the licensing basis for the facility.

The NRC staff's guidance for the review of TS is in Chapter 16.0, Revision 3, "Technical Specifications," dated March 2010 (ADAMS Accession No. ML100351425) of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light-Water Reactor] Edition" (SRP). As described therein, as part of the regulatory standardization effort, the NRC staff has prepared STS for each of the LWR nuclear designs. Accordingly, the NRC staff's review includes consideration of whether the proposed changes are consistent with the applicable reference STS (i.e., the current STS), as modified by NRC-approved travelers. In addition, the guidance states that comparing the change to previous STS can help clarify the TS intent.

## 3.0 TECHNICAL EVALUATION

The NRC staff reviewed Traveler TSTF-541, Revision 2, which proposed changes to NUREG-1430, NUREG-1431, NUREG-1432, NUREG-1433, and NUREG-1434. The regulatory framework the NRC staff used to determine the acceptability of the proposed changes consists of the requirements and guidance listed in Section 2.3 of this safety evaluation. The NRC staff reviewed the changes to determine whether the proposed changes to the STS meet the standards for TS in 10 CFR 50.36, as well as conform to the Final Policy Statement on TS Improvements for Nuclear Power Reactors. The NRC staff also used the SRP to determine whether the proposed changes to the STS would clarify the intent of the STS.

In NUREG-1430 through 1434, the NRC staff-accepted format for SRs is text which states that certain SSCs or systems (subsystems, trains, etc.) of components must be verified to be able to actuate or function. Each verification must be performed at a given frequency. The rules governing SRs are explicitly stated in the STS in SR 3.0.1 through SR 3.0.4. While SR 3.0.1 through SR 3.0.4 are explicit with respect to when SRs are to be met and performed, the text of the individual SRs in the STS, and typically in a plant-specific TS, does not contain more detail than a system name or component name. The details of how the licensee will implement SRs are contained in licensee-controlled procedures.

During its reviews of previous proposals to address the issue (i.e., TSTF-512 and earlier revisions of TSTF-541), the NRC staff had concerns regarding the acceptability of providing exceptions to the SRs for SSCs. The NRC staff was concerned that locking or securing SSCs in position could have inadvertent effects on system OPERABILITY, SSC quality, clarity of a plant's licensing basis, and the validity of a plant's current radiological consequence analyses if exceptions to the SRs for SSCs were adopted. The technical evaluation section of TSTF-541, Revision 2, contains justification for the current proposed change and states:

> These allowances permit components to be exempted from testing under the SR. However, the proposed change does not permit a system that is inoperable to be considered operable. As stated in the SR 3.0.1 Bases, "Nothing in this Specification, however, is to be construed as implying that systems or components are OPERABLE when: a. The systems or components are known to be inoperable, although still meeting the SRs."
>
> Placing a component in a condition not consistent with the design requires consideration of the effect on the operability of the associated system or any supported systems under the licensee's administrative processes, such as the

operability determination process. The model application requires licensees to verify that their administrative processes require assessing the operability of the system or any supported systems when utilizing the SR allowances. The operability assessment will consider whether movement of the affected valves or dampers following an event is assumed in the safety analysis (i.e., the analysis of design basis accidents, anticipated operational occurrences, and transients).

As stated in the proposed TS Bases, the automatic valve or damper is verified to be in the correct position prior to locking, sealing, or securing it in position. Valves and dampers that are locked, sealed, or otherwise secured are entered into the licensee's tagging program, which is routinely inspected by the NRC under various 71111 procedures in the NRC Inspection Manual. While in the actuated position, verification of automatic actuation or valve isolation time is not necessary as the specified safety function is assured. However, as with the existing similar SR allowances, the SR must be verified to be met within its required Frequency after removing the valve or damper from the locked, sealed or otherwise secured status.

These allowances and the proposed change do not permit changing the plant design, which must be evaluated under 10 CFR 50.59, and the Final Safety Analysis Report (FSAR) must be updated per 10 CFR 50.71(e). If the valve or damper is locked, sealed, or otherwise secured to support plant operation (such as changing modes, or removing or placing systems in operation), restoration to the design condition is controlled by plant procedures, changes to which are also governed by 10 CFR 50.59. If the valve or damper is locked, sealed, or otherwise secured to facilitate maintenance, restoration is governed by 10 CFR 50, Appendix B, Criterion XVI, and 10 CFR 50.65. If the SR exception is utilized to not test the actuation of a valve or damper and the specified Frequency of the SR is exceeded without testing the component, the SR must be performed on the component when it is returned to service in order to meet the SR.

Under the proposed change, the affected valves and dampers may be excluded from testing when locked, sealed or otherwise secured in the actuated position. However, if the exception is used the operability of the system or any supported systems must be assessed, including whether the safety analysis assumes movement from the actuated position following an event. If the system cannot perform its specified safety function it is inoperable regardless of whether the SR is met. Therefore, the proposed allowance has no effect on the ability to satisfy the safety analysis assumptions.

The above justification was developed during TSTF and NRC discussions regarding previous revisions of TSTF-541. The NRC staff agrees with the statements for the reasons described in the following paragraphs.

In the technical evaluation section of TSTF-541, Revision 2, quoted above, the traveler states that "safety analysis" is the analysis of design basis accidents, anticipated operational occurrences, and transients. It is noted that in the proposed changes to the STS Bases, this is referred to as the "accident analysis." The NRC staff notes that while "accidents" are a specific category of all design basis events, the terms "safety analysis" and "accident analysis" are considered equivalent in this context.

The procedures for how a licensee will implement SRs are discussed in Section 8.b of Appendix A to RG 1.33, Revision 2, which is a requirement of STS 5.4. The procedures for general maintenance and equipment work clearances and logging discussed in Section 9.e of Appendix A to RG 1.33, Revision 2, are also requirements of TS 5.4. Since SR procedures along with maintenance, equipment work clearance, and logging procedures are licensee-controlled documents, changes to the procedure details must be done in accordance with 10 CFR 50.59. If the change would require NRC approval, 10 CFR 50.59 would require the licensee to submit an amendment request to the NRC per 10 CFR 50.90. SSCs with SRs are scoped into the requirements of 10 CFR 50.65 and 10 CFR 50.65(a)(4) contains the requirement to assess and manage the risk of maintenance. Therefore, a licensee must further evaluate the effect of any maintenance on SSCs for which the exception is employed. Given the stipulations of 10 CFR 50.59 and 10 CFR 50.65, the NRC staff has reasonable assurance that a licensee will assess the impact of using the exception in the SR for the SSCs and systems involved. If a licensee failed to make the proper assessments, enforcement actions related to the stated regulations could be taken.

Since 10 CFR 50.59 and 10 CFR 50.65 require a licensee to evaluate and document a change, the exception is acceptable because there is reasonable assurance that placing the component in a given position will not inadvertently impact the operability of required SSCs. The NRC staff determined that there is reasonable assurance that the change will not have inadvertent effects on system OPERABILITY or SSC quality.

The traveler contained a model license amendment request (LAR) that a licensee would use to propose adoption of the TSTF-541, Revision 2, changes to its TS via 10 CFR 50.90. The model LAR contains the following statements a licensee would make to propose adoption of the changes to its TS:

> While the proposed exceptions permit automatic valves and dampers that are locked, sealed, or otherwise secured in the actuated position to be excluded from the SR in order to consider the SR met, the proposed changes will not permit a system that is made inoperable by locking, sealing, or otherwise securing an automatic valve or damper in the actuated position to be considered operable. As stated in the [SR 3.0.1] Bases, "Nothing in this Specification, however, is to be construed as implying that systems or components are OPERABLE when: a. The systems or components are known to be inoperable, although still meeting the SRs."
>
> …
>
> [LICENSEE] acknowledges that under the proposed change, the affected valves and dampers may be excluded from the SR when locked, sealed or otherwise secured in the actuated position. However, if the safety analysis assumes movement from the actuated position following an event, or the system is rendered inoperable by locking, sealing, or otherwise securing the valve or damper in the actuated position, then the system cannot perform its specified safety function and is inoperable regardless of whether the SR is met.
>
> [LICENSEE] acknowledges for components for which the SR allowance can be utilized, the SR must be verified to have been met within its required Frequency after removing the valve or damper from the locked, sealed or otherwise secured

status. If the SR exception is utilized to not test the actuation of a valve or damper and the specified Frequency of the SR is exceeded without testing the component, the SR must be performed on the component when it is returned to service in order to meet the SR.

Given the statements a licensee would provide on the docket to adopt the TSTF-541, Revision 2, changes, the NRC staff determined that there is reasonable assurance that the change will not have inadvertent effects on the clarity of a plant's licensing basis.

The NRC staff determined that the STS, as amended by the TSTF-541, Revision 2, changes will continue to provide an acceptable way to meet 10 CFR 50.36(c)(3) because the STS SRs will continue to provide assurance that the necessary quality of systems and components is maintained and that the LCOs will be met.

The NRC staff also determined that when the exception is used, the radiological consequences for the accidents previously evaluated are not changed since the system is still capable of performing the specified safety function assumed in the accident analyses and the associated TS actions are followed if the system cannot perform its specified safety function. Additionally, the licensee is required to perform filter testing in accordance with the Ventilation Filter Testing Program as stated in the accompanying STSs SRs, as these SRs are not affected by this proposed change. The Ventilation Filter Testing Program in STS 5.5.11/5.5.8 would identify any filter degradation and ensure the ability of the filters to perform in a manner consistent with the licensing basis for the facility.

## 4.0 CONCLUSION

The NRC staff reviewed Traveler TSTF-541, Revision 2, which proposed changes to NUREG-1430, NUREG-1431, NUREG-1432, NUREG-1433, and NUREG-1434. The NRC staff determined that the proposed changes to the STS meet the standards for TS in 10 CFR 50.36. The proposed changes and the STS, as revised, continue to specify the appropriate SRs for tests and inspections to ensure the necessary quality of affected SSCs is maintained and that the LCOs are met.

Additionally, the changes to the STS were reviewed and found to be technically clear and consistent with customary terminology and format in accordance with SRP Chapter 16.0.

The NRC staff reviewed the proposed changes against the regulations and concludes that the changes continue to meet the requirements of 10 CFR 50.36, for the reasons discussed above, and thus provide reasonable assurance that a licensee adopting these changes will have the requisite requirements and controls to operate safely. Therefore, the NRC staff concludes that the proposed STS changes are acceptable.

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