the above address, 703–292–8030, or *ACApermits@nsf.gov.*

SUPPLEMENTARY INFORMATION: The National Science Foundation, as directed by the Antarctic Conservation Act of 1978 (Pub. L. 95–541, 45 CFR 671), as amended by the Antarctic Science, Tourism and Conservation Act of 1996, has developed regulations for the establishment of a permit system for various activities in Antarctica and designation of certain animals and certain geographic areas requiring special protection. The regulations establish such a permit system to designate Antarctic Specially Protected Areas.

Application Details

1. *Applicant*—Permit Application: 2018–023
   Cory Wolff, National Center for Atmospheric Research, P.O. Box 3000, Boulder, CO 80307–3000.

Activity for Which Permit Is Requested

Waste Management. The applicant is seeking a permit for waste management activities associated with an atmospheric research study over the Southern Ocean. The applicant proposes to release up to 30 expendable weather reconnaissance devices, dropsondes, from a Gulfstream V research aircraft while flying between 60 and 65 degrees south. Each dropsonde consists of a 12-inch long, 2-inch diameter resin tube containing a lead-free circuit board, plastic components, and small lithium batteries with a small parachute attached.

Location

Southern Ocean, south of Hobart, Tasmania.

Dates of Permitted Activities

January 15–February 26, 2018.

Nadene G. Kennedy,

Polar Coordination Specialist, Office of Polar Programs.

[FR Doc. 2017–23362 Filed 10–26–17; 8:45 am]

BILLING CODE 7555–01–P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards (ACRS); Meeting of the ACRS Subcommittee on Planning and Procedures; Notice of Meeting

The ACRS Subcommittee on Planning and Procedures will hold a meeting on November 1, 2017, 11545 Rockville Pike, Room T–2B3, Rockville, Maryland 20852.

The meeting will be open to public attendance.

The agenda for the subject meeting shall be as follows:

Wednesday, November 1, 2017—12:00 p.m. Until 1:00 p.m.

The Subcommittee will discuss proposed ACRS activities and related matters. The Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions, as appropriate, for deliberation by the Full Committee.

Members of the public desiring to provide oral statements and/or written comments should notify the Designated Federal Official (DFO), Quynh Nguyen (Telephone 301–415–5844 or Email: *Quynh.Nguyen@nrc.gov*) five days prior to the meeting, if possible, so that arrangements can be made. Thirty-five hard copies of each presentation or handout should be provided to the DFO thirty minutes before the meeting. In addition, one electronic copy of each presentation should be emailed to the DFO one day before the meeting. If an electronic copy cannot be provided within this timeframe, presenters should provide the DFO with a CD containing each presentation at least thirty minutes before the meeting. Electronic recordings will be permitted only during those portions of the meeting that are open to the public. Detailed procedures for the conduct of and participation in ACRS meetings were published in the **Federal Register** on October 4, 2017 (82 FR 46312).

Information regarding changes to the agenda, whether the meeting has been canceled or rescheduled, and the time allotted to present oral statements can be obtained by contacting the identified DFO. Moreover, in view of the possibility that the schedule for ACRS meetings may be adjusted by the Chairman as necessary to facilitate the conduct of the meeting, persons planning to attend should check with the DFO if such rescheduling would result in a major inconvenience.

If attending this meeting, please enter through the One White Flint North building, 11555 Rockville Pike, Rockville, Maryland 20852. After registering with Security, please contact Mr. Theron Brown at 240–888–9835 to be escorted to the meeting room.

Mark L. Banks,

Chief, Technical Support Branch, Advisory Committee on Reactor Safeguards.

[FR Doc. 2017–23365 Filed 10–26–17; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[Docket No. 50–336; NRC–2017–0197]

Dominion Nuclear Connecticut, Inc.; Millstone Power Station, Unit No. 2, Request for Exemption Regarding the Use of Operator Manual Actions

AGENCY: Nuclear Regulatory Commission.

ACTION: Exemption; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing an exemption in response to an October 28, 2016, request from Dominion Nuclear Connecticut, Inc. (the licensee, Dominion) for Millstone Power Station, Unit No. 2 (Millstone 2), Docket No. 50–336, for the use of operator manual actions (OMAs) in lieu of meeting the circuit separation and protection requirements for four plant fire areas.

DATES: The exemption was issued on October 24, 2017.

ADDRESSES: Please refer to Docket ID NRC–2017–0197 when contacting the NRC about the availability of information regarding this document. You may obtain publicly-available information related to this document using any of the following methods:

- *Federal Rulemaking Web site:* Go to *http://www.regulations.gov* and search for Docket ID NRC–2017–0197. Address questions about NRC dockets to Carol Gallagher; telephone: 301–415–3463; email: *Carol.Gallagher@nrc.gov.* For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.
- *NRC's Agencywide Documents Access and Management System (ADAMS):* You may obtain publicly-available documents online in the ADAMS Public Documents collection at *http://www.nrc.gov/reading-rm/adams.html.* To begin the search, select ''*ADAMS Public Documents*'' and then select ''*Begin Web-based ADAMS Search.*'' For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1–800–397–4209, 301–415–4737, or by email to *pdr.resource@nrc.gov.* The ADAMS accession number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in this document.
- *NRC's PDR:* You may examine and purchase copies of public documents at the NRC's PDR, Room O1–F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: Richard Guzman, Office of Nuclear

Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–1030, email: *Richard.Guzman@nrc.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

Dominion is the holder of Renewed Facility Operating License No. DPR–65, which authorizes operation of Millstone 2. The license provides, among other things, that the facility is subject to all rules, regulations, and orders of the NRC, now or hereafter in effect.

Millstone 2 shares the site with Millstone Power Station, Unit No. 1, a permanently defueled boiling-water reactor nuclear unit, and Millstone Power Station, Unit No. 3, a pressurized-water reactor. The facility is located in Waterford, Connecticut, approximately 3.2 miles southwest of New London, Connecticut. This exemption applies to Millstone 2 only. The other units, Millstone 1 and 3, are not part of this exemption.

II. Request/Action

Section 50.48 of title 10 of the *Code of Federal Regulations* (10 CFR), requires that nuclear power plants that were licensed before January 1, 1979, satisfy the requirements of appendix R to 10 CFR part 50, section III.G, ''Fire protection of safe shutdown capability.'' Millstone 2 was licensed to operate prior to January 1, 1979. As such, the licensee's fire protection program (FPP) must provide the established level of protection as intended by section III.G.

By letter dated October 28, 2016 (ADAMS Accession No. ML16305A330), the licensee requested an exemption for Millstone 2 from certain technical requirements of 10 CFR part 50, appendix R, section III.G.2 (III.G.2), for the use of OMAs in lieu of meeting the circuit separation and protection requirements contained in section III.G.2 for fire areas R–9, R–10, R–13, and R–14.

III. Discussion

Pursuant to § 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR part 50 when the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security. However, § 50.12(a)(2) states that the Commission will not consider granting an exemption unless special circumstances are present as set forth in § 50.12(a)(2). Under § 50.12(a)(2)(ii), special circumstances are present when application of the regulation in the particular circumstances would not serve, or is not necessary to achieve, the underlying purpose of the rule.

The licensee stated that special circumstances are present in that the application of the regulation in this particular circumstance is not necessary to achieve the underlying purpose of the rule, which is consistent with the language included in § 50.12(a)(2)(ii). The licensee further stated that the OMAs included in the exemption request provide assurance that one train of systems necessary to achieve and maintain hot shutdown will remain available in the event of a fire.

In accordance with § 50.48(b), nuclear power plants licensed before January 1, 1979, are required to meet section III.G. The underlying purpose of section III.G is to ensure that the ability to achieve and maintain safe shutdown is preserved following a fire event. The regulation intends for licensees to accomplish this by extending the concept of defense-in-depth (DID) to:

a. Prevent fires from starting;

b. Rapidly detect, control, and extinguish promptly those fires that do occur;

c. Provide protection for structures, systems, and components (SSCs) important to safety so that a fire that is not promptly extinguished by the fire suppression activities will not prevent the safe shutdown of the plant.

The stated purpose of section III.G.2 is to ensure that in the event of a fire, one of the redundant trains necessary to achieve and maintain hot shutdown conditions remains free of fire damage. Section III.G.2 requires one of the following means to ensure that a redundant train of safe shutdown cables and equipment is free of fire damage where redundant trains are located in the same fire area outside of primary containment:

a. Separation of cables and equipment by a fire barrier having a 3-hour rating;

b. Separation of cables and equipment by a horizontal distance of more than 20 feet with no intervening combustibles or fire hazards and with fire detectors and an automatic fire suppression system installed in the fire area; or

c. Enclosure of cables and equipment of one redundant train in a fire barrier having a 1-hour rating and with fire detectors and an automatic fire suppression system installed in the fire area.

The licensee stated that the OMAs addressed in the exemption request are those contained in the Millstone 2 10 CFR part 50, appendix R compliance report (report). The licensee also stated that the Millstone 2 appendix R report was submitted to the NRC for review on May 29, 1987 (ADAMS Legacy Accession No. 8706120088), and found acceptable by an NRC safety evaluation report (SER) dated July 17, 1990 (ADAMS Accession No. ML012880391). However, the SER did not specifically evaluate the OMAs (*i.e.,* pursuant to § 50.12).

By letter dated June 30, 2011 (ADAMS Accession No. ML11188A213), as revised by letter dated October 29, 2012 (ADAMS Accession No. ML12318A128), the licensee submitted an exemption request for the OMAs contained in the Millstone 2 appendix R report. However, four OMAs related to loss of instrument air for four specific fire areas were removed by letter dated February 29, 2012 (ADAMS Accession No. ML12069A016) because the loss of instrument air was not considered a postulated event. The NRC approved the revised exemption by NRC letter dated December 18, 2012 (ADAMS Accession No. ML12312A373).

During the 2016 triennial fire inspection (ADAMS Accession No. ML16258A175), it was identified that a loss of offsite power will result in a loss of instrument air prior to the emergency diesel generators starting. Since instrument air does not automatically restart, nor can it be manually started from the control room, the licensee has submitted this exemption request for those four OMAs related to loss of instrument air for the four specific fire areas.

Each OMA included in this review consists of a sequence of tasks to be performed in various fire areas upon confirmation of a fire in a particular fire area. Table 1 lists the OMAs included in this review (OMAs are listed in the order they are conducted for a fire originating in a particular area). Some OMAs are listed more than once if they are needed for fires that originate in different areas.

TABLE 1

OMA No.	OMA description	Area of fire origin	OMA location	Required OMA completion time	Equipment	Postulated damage type
1	Manually open valve to establish charging pump suction.	R–10	R–4/A–6A (AppR–2)	Within 72 minutes after restoring charging.	2–CH–192, Refueling Water Storage Tank (RWST) Isolation Valve.	Cable damage or loss of instrument air.
1	Manually open valve to establish charging pump suction.	R–9, R–13, and R–14.	R–4/A–6A (AppR–2)	Within 72 minutes after restoring charging.	2–CH–192, RWST Isolation Valve.	Loss of instrument air.
9	Control at Fire Shutdown Panel C–10 until loss of backup air or local manual operation.	R–13, R–14	R–2/T–10 (AppR–9), R–3/T–1A (AppR–7).	Within 45 minutes after loss of main feedwater.	2–FW–43B, Auxiliary Feedwater (AFW) Flow Control Valve.	Loss of instrument air.
10	Manually operate valve to transition main steam safety valves (MSSVs).	R–10	R–17/A–10C (AppR–6)	After establishing AFW	2–MS–190A, Atmospheric Dump Valve.	Cable damage or loss of instrument air.
11	Control at Fire Shutdown Panel C–10 (R–13 fire) until loss of air, manually operate valve to transition from MSSVs.	R–9, R–14	R–2/T–10(C–10) (AppR–9), R–2/A–8E (Manual operation) (AppR–6).	After establishing AFW	2–MS–190B, Atmospheric Dump Valve.	Cable damage or loss of instrument air.
11	Control at Fire Shutdown Panel C–10 (R–13 fire) until loss of air, manually operate valve to transition from MSSVs.	R–13	R–2/T–10(C–10) (AppR–9), R–2/A–8E (Manual operation) (AppR–6).	After establishing AFW	2–MS–190B, Atmospheric Dump Valve.	Loss of instrument air.

The designations Z1 and Z2 are used throughout this exemption. The licensee stated that the 4.16 kilovolt (kV) subsystems are divided into two specific ''facilities.'' Facility Z1 powers one train of engineered safety features (ESFs) and is provided with an emergency power supply by the ''A'' emergency diesel generator (EDG). Facility Z2 powers a redundant second train of ESF and is provided with an emergency power supply by the ''B'' EDG. The licensee also stated that vital power and control cables fall mainly into two redundancy classifications: Channel Z1 and Channel Z2, and that in a few cases, there is also a Channel Z5, which is a system that can be transferred from one source to another. The licensee further stated that Facility Z1 would be synonymous with ''A'' train, while Facility Z2 would be synonymous with ''B'' train.

The licensee stated that its exemption request is provided in accordance with the information contained in NRC Regulatory Issue Summary 2006–10, ''Regulatory Expectations with Appendix R Paragraph III.G.2 Operator Manual Actions,'' dated June 30, 2006, which states that an approved § 50.12 exemption is required for all OMAs, even those accepted in a previously issued NRC SER.

As indicated above, the licensee has requested an exemption from the requirements of section III.G.2 for Millstone 2 to the extent that one of the redundant trains of systems necessary to achieve and maintain hot shutdown is not maintained free of fire damage in accordance with one of the required means for a fire occurring in the following fire areas:

- R–9 Facility Z1 DC switchgear room and battery room,
- R–10 Facility Z2 DC switchgear room and battery room;
- R–13 west 480 VAC switchgear room;
- R–14 Facility Z1 lower 4.16kV switchgear room and cable vault.

The licensee stated that the OMAs are credited for the section III.G.2 deficiencies, such as having only a single safe shutdown train, lack of separation between redundant trains, lack of detection and automatic suppression in the fire area, or a combination of those deficiencies. The NRC staff notes that having only a single safe shutdown train is not uncommon to this plant design. Single train systems at Millstone 2 include IA, ''A'' and ''B'' boric acid storage tank (BAST) control room (CR) level indication, condensate storage tank (CST) CR level indication, suction-side flow to the charging pumps from the refueling water storage tank (RWST), auxiliary spray to the pressurizer, and charging pump discharge to the reactor coolant system (RCS).

The licensee also stated that it has evaluated and modified all motor-operated valves (MOVs) relied upon by OMAs consistent with NRC Information Notice 92–18, ''Potential for Loss of Remote Shutdown Capability During a Control Room Fire,'' dated February 28, 1992, which details the potential for fires to damage MOVs that are required for safe shutdown so that they can no longer be remotely or manually operated, and that as a result of this evaluation and modifications, the possibility that the desired result was not obtained is minimized. The licensee further stated that all the equipment operated to perform these OMAs is not fire affected and, therefore, is reasonably expected to operate as designed.

In its submittals, the licensee described elements of its FPP that provide its justification that the concept of DID in place in the above fire areas is consistent with that intended by the regulation. To accomplish this, the licensee utilizes various protective measures to accomplish the concept of DID. Specifically, the licensee stated that the purpose of its request was to credit the use of OMAs, in conjunction with other DID features, in lieu of the separation and protective measures required by 10 CFR part 50, appendix R, section III.G.2.

The licensee indicated that its FPP uses the concept of DID, both procedurally and physically, to meet the following objectives:

1. Prevent fires from starting;
2. Rapidly detect, control, and extinguish promptly those fires that do occur; and
3. Provide protection for SSCs important to safety so that a fire that is not promptly extinguished by the fire suppression activities will not prevent the safe shutdown of the plant.

The licensee provided an analysis that described how fire prevention is addressed for each of the fire areas for which the OMAs may be required. Unless noted otherwise below, all of the fire areas included in this exemption have a combustible fuel load that is considered to be low, with fuel sources consisting primarily of fire-retardant cable insulation and limited floor-based combustibles. There are no high energy ignition sources located in the areas except as noted in fire area R–14. The fire areas included in the exemption request are not shop areas, so hot work activities are infrequent with administrative control (*e.g.,* hot work permits, fire watch, and supervisory controls) programs in place if hot work activities do occur. The administrative controls are described in the Millstone FPP, which is incorporated into the Updated Final Safety Analysis Report.

The licensee stated that the storage of combustibles is administratively controlled by the site's FPP procedures to limit the effects of transient fire exposures on the plant and in addition, hot work (*i.e.,* welding, cutting, grinding) is also administratively controlled by a site FPP procedure.

The licensee also stated that the integration of the program, personnel, and procedures, which are then collectively applied to the facility, reinforce the DID aspect of the FPP and that strict enforcement of ignition source and transient combustible control activities (through permitting) and monthly fire prevention inspections by the site fire marshal ensure that this work is actively monitored to prevent fires.

The licensee stated that the Millstone fire brigade consists of a minimum of a Shift Leader and four fire brigade personnel. The affected unit (Millstone 2 or Millstone 3) supplies an advisor, who is a qualified Plant Equipment Operator (PEO). The advisor provides direction and support concerning plant operations and priorities. Members of the fire brigade are trained in accordance with Millstone procedures. Fire brigade personnel are responsible for responding to all fires, fire alarms, and fire drills. To ensure availability, a minimum of a Shift Leader and four fire brigade personnel remain in the owner-controlled area and do not engage in any activity that would require a relief in order to respond to a fire. The licensee further stated that the responding fire brigade lead may request the Shift Manager augment the on-shift five-member fire brigade with outside resources from the Town of Waterford Fire Department, which has a letter of agreement with Millstone, to respond to the site (when requested) in the event of a fire emergency or rescue and will attempt to control the situation with available resources.

Millstone 2 has been divided into fire areas, as described in the Millstone FPP. Three-hour fire barriers are normally used to provide fire resistive separation between adjacent fire areas. In some cases, barriers with a fire resistance rating of less than 3 hours are credited, but exemptions have been approved, or engineering evaluations performed, in accordance with Generic Letter (GL) 86–10, ''Implementation of Fire Protection Requirements,'' to demonstrate that the barriers are sufficient for the hazard. Walls separating rooms within fire areas are typically constructed of concrete. The licensee stated that in general, fire-rated assemblies separating appendix R fire areas meet Underwriters Laboratories/Factory Mutual (UL/FM) design criteria and the requirements of American Society of Testing Materials (ASTM) E–119, ''Fire Tests of Building Construction and Materials,'' for 3-hour rated fire assemblies. The licensee also stated that openings created in fire-rated assemblies are sealed utilizing penetration seal details that have been tested in accordance with ASTM E–119 and are qualified for a 3-hour fire rating. In addition, fireproof coating of structural steel conforms to UL-listed recognized details and is qualified for a 3-hour fire rating. The licensee further stated that fire dampers are UL-listed and have been installed in accordance with the requirements of National Fire Protection Association (NFPA) 90A, ''Standard for the Installation of Air-Conditioning and Ventilation Systems,'' and that the code of record for fire dampers is either the version in effect at the time of original plant construction (late 1960s) or the 1985 edition. The licensee further stated that fire doors are UL-listed and have been installed in accordance with NFPA 80, ''Standard for Fire Doors and Windows,'' in effect in the late 1960s, at the time of plant construction.

The licensee provided a discussion of the impacts of any GL 86–10 evaluations and/or exemptions on the fire areas included in this exemption request. For all the areas with GL 86–10 evaluations and/or other exemptions, the licensee stated that none of the issues addressed by the evaluations would adversely impact, through the spread of fire or products of combustion, plant areas where OMAs are performed or the respective travel paths necessary to reach these areas. The licensee also stated that there are no adverse impacts on the ability to perform OMAs and that the conclusions of the GL 86–10 evaluations and the exemption requests would remain valid with the OMAs in place. In addition to these boundaries, the licensee provided a hazard analysis that described how detection, control, and extinguishment of fires are addressed for each of the fire areas for which the OMAs may be needed.

Unless noted otherwise below, fire areas are provided with ionization smoke detectors. The licensee stated that the smoke and heat detection systems were designed and installed using the guidance of the requirements set forth in several NFPA standards, including the 1967, 1979, and 1986 Editions of NFPA 72D, ''Standard for the Installation, Maintenance and Use of Proprietary Protective Signaling Systems for Watchman, Fire Alarm and Supervisory Service,'' and the 1978 and 1984 Editions of NFPA 72E, ''Standard on Automatic Fire Detectors.'' Upon detecting smoke or fire, the detectors initiate an alarm in the CR enabling fire brigade response. The licensee stated that in most cases, no automatic fire suppression systems are provided in the areas included in this exemption request except for plant areas with significant quantities of combustibles, such as lube oil. Automatic fire suppression systems have also been installed in areas with 1-hour barrier walls and 1-hour rated electrical raceway encapsulation.

The licensee stated that fire suppression systems were designed in general compliance with, and to meet the intent of, the requirements of several NFPA standards, depending on the type of system, including the 1985 Edition of NFPA 13, ''Standard for the Installation of Sprinkler Systems''; the 1985 Edition of NFPA 15, ''Standard for Water Spray Fixed Systems For Fire Protection''; and the 1987 Edition of NFPA 12A, ''Standard on Halon 1301 Fire Extinguishing Systems.''

The licensee stated that, in general, fire extinguishers and hose stations have been installed in accordance with the requirements of the 1968 Edition of NPFA 10, ''Standard for the Installation of Portable Fire Extinguishers,'' and the 1978 Edition of NFPA 14, ''Standard for the Installation of Standpipe and Hose Systems,'' respectively. The licensee stated that Equipment Operators are trained fire brigade members and would likely identify and manually suppress or extinguish a fire using the portable fire extinguishers and manual hose stations located either in or adjacent to, or both, these fire areas.

Each of the fire areas included in this exemption is analyzed below with regard to how the concept of DID is achieved for each area and the role of

the OMAs in the overall level of safety provided for each area.

A.1 Fire Area R–9, ''A'' East DC Equipment Room

A.1.1 Fire Prevention

The licensee stated that the area has low combustible loading that predominantly consists of cable insulation, and that potential ignition sources include electrical faults.

A.1.2 Detection, Control, and Extinguishment

The licensee stated that the area is provided with a cross-zoned ionization and photoelectric smoke detection system that activates a total flooding Halon 1301 fire suppression system and that the Halon 1301 suppression system has manual release stations at each doorway and an abort switch located at the doorway to the east CR/cable vault stairway. The licensee also stated that this system alarms locally at the Halon control panel and at the main fire alarm panel in the CR. The licensee further stated that duct smoke detection is provided between this area, the ''B'' (west) DC equipment room (fire hazard analysis (FHA) Zone A–21), and the auxiliary building cable vault (FHA Zone A–24) and that this system alarms at a local panel and at the main fire alarm panel in the CR. The licensee further stated that a fire in the area that could potentially impact any cables of concern would likely involve cable insulation resulting from an electrical fault or failure of a bus or electrical panel located in the room and that combustibles in this area consist predominantly of Institute of Electrical and Electronics Engineers (IEEE) 383 qualified cable insulation or cable that has been tested and found to have similar fire resistive characteristics. The licensee further stated that since there is a minimal amount of Class A combustibles in this area, there is little chance of a fire occurring outside of a bus/electrical panel failure, which could act as a pilot ignition source for the cable insulation and that a bus/electrical panel failure normally results in a high intensity fire that lasts for a short duration, which makes it unlikely that it will cause sustained combustion of IEEE 383 qualified cables. The licensee further stated that in the unlikely event of a fire in this area, it would be rapidly detected by the cross-zoned ionization and photoelectric smoke detection smoke detection system, subsequently extinguished by the total flooding Halon 1301 suppression system, and the smoke detection system would also aid in providing prompt fire brigade response.

A.1.3 Preservation of Safe Shutdown Capability

The licensee stated that the OMAs associated with a fire in the area are related to a loss of IA or a loss of power to the ''A'' DC buses (such as DV10) and that cables for valves 2–CH–192, 2–CH–508, and 2–CH–509 do not pass through this room.

The licensee stated that a fire in the area will affect all Facility Z1 shutdown components that Facility Z2 is used to achieve and maintain Hot Standby, and that plant shutdown to Hot Standby can be accomplished using an abnormal operating procedure (AOP).

A.1.4 OMAs Credited for a Fire in This Area

The licensee stated that OMAs 1 and 11 are credited for a fire originating in Fire Area R–9 in order to provide decay heat removal and restore charging system flow to RCS in the event of cable damage or loss of IA.

A.1.4.1 Auxiliary Feedwater (AFW) and Charging System Flow

A.1.4.1.1 OMAs 1 and 11 Open Valve 2–CH–192 and Control Valve 2–MS–190B at Panel C10 or Local Manual Operation

The licensee stated that establishing AFW flow to the credited steam generator (SG) is required to be accomplished within 45 minutes and that the required flow path utilizes the turbine driven auxiliary feedwater (TDAFW) pump. The licensee also stated that prior to AFW initiation, the plant is placed in the Hot Standby condition by steaming through the main steam safety valves (MSSVs) and that after AFW is established from the CR, operation of the atmospheric dump valve (ADV) (2–MS–190B) (OMA 11) is the required method of removing decay heat to maintain Hot Standby and transition to Cold Shutdown. The licensee further stated that there is no cable damage from fire to the required ADV (2–MS–190B); however, the fire may cause a loss of IA, which is required to operate the ADVs to support decay heat removal. The licensee stated that upon a loss of air, the ADV will fail closed and that this design prevents excessive RCS cooldown prior to AFW start; therefore, in the event of a loss of IA, Operators will establish local manual control of 2–MS–190B after AFW flow is established. The licensee further stated that PEO–2 will remain with the ADV to modulate steam flow per direction from the CR and that after restoration of the charging system, the BASTs are credited for maintaining RCS inventory and that the BASTs have a minimum level specified in the technical requirements manual (TRM), which ensures 72 minutes of flow. The licensee further stated that once the BASTs are depleted, Operators switch over to the RWST. The licensee further stated that due to fire damage, the 2–CH–192 valve may spuriously close and in order to establish the RWST as the suction path for the charging system, an OMA is required to open valve 2–CH–192 (OMA 1) prior to BAST depletion. OMA 1 establishes the RWST as the suction supply for the charging system and is not conducted until after AFW is established.

A.1.4.2 OMA Timing

AFW flow is established from the CR within the required 45-minute time period. Should IA be lost, the OMA to continue decay heat removal can be conducted beginning 17 minutes after AFW flow is established? The OMA to establish charging system flow from the RWST prior to BAST depletion can be completed in 32 minutes, which provides a 40-minute margin, since the required completion time is 72 minutes.

A.1.5 Conclusion

Given the limited amount of combustible materials and ignition sources and installed detection and suppression, it is unlikely that a fire would occur and go undetected or unsuppressed by the personnel and damage the safe shutdown equipment. The low likelihood of damage to safe shutdown equipment due to a fire in this area, combined with the ability of the OMAs to manipulate the plant in the event of a fire that damages safe shutdown equipment and to be completed with more than 30 minutes of margin, provides adequate assurance that safe shutdown capability is maintained.

A.2 Fire Area R–10, ''B'' West Direct Current (DC) Equipment Room

A.2.1 Fire Prevention

The licensee stated that the area has low combustible loading that predominantly consists of cable insulation, and that potential ignition sources include electrical faults.

A.2.2 Detection, Control, and Extinguishment

The licensee stated that the area is provided with a cross-zoned ionization and photoelectric smoke detection system that activates a total flooding Halon 1301 fire suppression system and that the Halon 1301 suppression system has manual release stations at each

doorway and an abort switch located at the doorway to the ''A'' (east) DC equipment room (FHA Zone A–20). The licensee also stated that this system alarms locally on the Halon control panel and at the main fire alarm panel in the CR. The licensee further stated that duct smoke detection is provided between this fire area, the ''A'' (east) DC equipment room (FHA Zone A–20), and the AB cable vault (FHA Zone A–24), and that this system alarms at a local panel and at the main fire alarm panel in the CR. The licensee further stated that a fire in the area that could potentially impact any cables of concern would likely involve cable insulation resulting from an electrical fault or failure of a bus or electrical panel located in the room and that combustibles in this area consist predominantly of IEEE 383 qualified cable insulation or cable that has been tested and found to have similar fire resistive characteristics. The licensee further stated that since there is a minimal amount of Class A combustibles in this area, there is little chance of a fire occurring outside of a bus/electrical panel failure, which could act as a pilot ignition source for the cable insulation, and that a bus/electrical panel failure normally results in a high intensity fire that lasts for a short duration, which makes it unlikely that it will cause sustained combustion of IEEE 383 qualified cables. The licensee further stated that in the unlikely event of a fire in this area, it would be rapidly detected by the cross-zoned ionization and photoelectric smoke detection smoke detection system and subsequently extinguished by the total flooding Halon 1301 suppression system installed in this area and that the smoke detection system would also aid in providing prompt fire brigade response.

A.2.3 Preservation of Safe Shutdown Capability

The licensee stated that the OMAs associated with a fire in the area are related to loss of power to the ''B'' AC vital power panels (such as VA20) and that cables for level transmitters LT–206, LT–208, and LT–5282 do not pass through this room.

The licensee stated that a fire in the area will affect all Facility Z2 shutdown components that Facility Z1 is used to achieve and maintain Hot Standby, and that plant shutdown to Hot Standby can be accomplished using an AOP.

A.2.4 OMAs Credited for a Fire in This Area

The licensee stated that OMAs 1 and 10 are credited for a fire originating in R–10 to provide decay heat removal and restore charging system flow to RCS in the event of cable damage or loss of IA.

A.2.4.1 AFW and Charging System Flow

A.2.4.1.1 OMAs 1 and 10 Open Valve 2–CH–192 and Control Valve 2–MS–190A

The licensee stated that establishing AFW flow to the credited SG is required to be accomplished within 45 minutes and that the required flow path utilizes the TDAFW pump. The licensee also stated that prior to AFW initiation, the plant is placed in the Hot Standby condition by steaming through the MSSVs and that after AFW is established from the CR, operation of the ADV (2–MS–190A) (OMA 10) is the required method of removing decay heat to maintain Hot Standby and transition to Cold Shutdown. The licensee further stated that there is no cable damage from fire to the required ADV (2–MS–190A); however, the fire may cause a loss of IA which is required to operate the ADVs to support decay heat removal. The licensee stated that upon a loss of air, the ADV will fail closed and that this design prevents excessive RCS cooldown prior to AFW start and, therefore, in the event of a loss of IA, Operators will establish local manual control of 2–MS–190A after AFW flow is established. The licensee further stated that PEO–1 will remain with the ADV to modulate steam flow per direction from the CR and that after restoration of the charging system, the BASTs are credited for maintaining RCS inventory and that the BASTs have a minimum level specified in the TRM which ensures 72 minutes of flow. The licensee further stated that once the BASTs are depleted, Operators switch over to the RWST. The licensee further stated that due to fire damage, the 2–CH–192 valve may spuriously close and that in order to establish the RWST as the suction path for the charging system, an OMA is required to open valve 2–CH–192 (OMA 1) prior to BAST depletion. OMA 1 establishes the RWST as the suction supply for the charging system and is not conducted until after AFW is established.

A.2.4.2 OMA Timing

AFW flow is established from the CR within the required 45-minute time period and should IA be lost, the OMA to continue decay heat removal can be conducted beginning 17 minutes after AFW flow is established. The OMA to establish charging system flow from the RWST prior to BAST depletion can be completed in 24 minutes, which provides a 48-minute margin, since the required completion time is 72 minutes.

A.2.5 Conclusion

Given the limited amount of combustible materials and ignition sources and installed detection and suppression, it is unlikely that a fire would occur and go undetected or unsuppressed by the personnel and damage the safe shutdown equipment. The low likelihood of damage to safe shutdown equipment due to a fire in this area, combined with the ability of the OMAs to manipulate the plant in the event of a fire that damages safe shutdown equipment and to be completed with more than 30 minutes of margin, provides adequate assurance that safe shutdown capability is maintained.

A.3 Fire Area R–13, West 480 V Load Center Room

A.3.1 Fire Prevention

The licensee stated that the area has low combustible loading that predominantly consists of cable insulation and that potential ignition sources include electrical faults.

A.3.2 Detection, Control, and Extinguishment

The licensee stated that the area is provided with ionization smoke detection that alarms at the main fire alarm panel in the CR. The licensee also stated that a fire in the area that could potentially impact any cables of concern would likely involve cable insulation resulting from an electrical fault or a bus failure and that combustibles in the area consist predominantly of IEEE 383 qualified cable insulation or cable that has been tested and found to have similar fire resistive characteristics. The licensee further stated that since there is a minimal amount of Class A combustibles in this area, there is little chance of a fire occurring outside of a bus failure, which could act as a pilot ignition source for the cable insulation, and that a bus failure normally results in a high intensity fire that lasts for a short duration, which makes it unlikely that it will cause sustained combustion of IEEE 383 qualified cables. The licensee further stated that in the unlikely event of a fire, it would be rapidly detected by the ionization smoke detection system installed in the area and that the smoke detection system will aid in providing prompt fire brigade response.

A.3.3 Preservation of Safe Shutdown Capability

The licensee stated that the components of concern for the area are

for valves 2–CH–192, 2–CH–508, 2–CH–509, 2–FW–43B and 2–MS–190B; breaker A406, H21 (TDAFW speed control circuit); level transmitter LT–5282, P18C (''C'' charging pump); SV–4188 (TDAFW steam supply valve); and breaker DV2021.

The licensee stated that a fire in the area will affect Facility Z1 safe shutdown equipment, the ''A'' EDG will be unavailable due to a loss of the Facility Z1 power supply for the diesel room ventilation fan F38A, Facility Z2 is used to achieve and maintain Hot Standby, and plant shutdown to Hot Standby can be accomplished using an AOP.

A.3.4 OMAs Credited for a Fire in This Area

The licensee stated that OMAs 1, 9, and 11 are credited for a fire originating in Fire Area R–13 in order to provide decay heat removal and restore charging system flow to RCS in the event of cable damage or loss of IA.

A.3.4.1 AFW and Charging System Flow

A.3.3.4.1.1 OMAs 1, 9, and 11 Open Valve 2–CH–192, Control AFW Flow Valve 2–FW–43B, and Control Valve 2–MS–190B at Panel C10 or Local Manual Operation

The licensee stated that establishing AFW flow to the credited SG is required to be accomplished within 45 minutes and that the required flow path utilizes the TDAFW pump. The licensee also stated that prior to AFW initiation, the plant is placed in the Hot Standby condition by steaming through the MSSVs and that after AFW is established from the CR, operation of the ADV (2–MS–190B) (OMA 11) is the required method of removing decay heat to maintain Hot Standby and transition to Cold Shutdown. The licensee further stated that there is no cable damage from fire to the required ADV (2–MS–190B); however, the fire may cause a loss of IA, which is required to operate the ADVs to support decay heat removal. The licensee stated that upon a loss of air, the ADV will fail closed and that this design prevents excessive RCS cooldown prior to AFW start and, therefore, in the event of a loss of IA, Operators will establish local manual control of 2–MS–190B after AFW flow is established. The licensee further stated that PEO–2 will remain with the ADV to modulate steam flow per direction from the CR and that after restoration of the charging system, the BASTs are credited for maintaining RCS inventory and that the BASTs have a minimum level specified in the TRM, which ensures 72 minutes of flow.

The licensee stated that a loss of IA or power causes AFW flow control valve 2–FW–43B to fail open. However, the licensee also stated that the circuit can be isolated and controlled from Fire Shutdown Panel C–10. Therefore, OMA 9 is required to isolate the damaged cables and operate the TDAFW turbine speed control to maintain level in the SG with AFW flow control valve 2–FW–43B failed open. After AFW flow is established, the licensee stated that the steam release path from the SG may be switched from the MSSVs to ADV 2–MS–190B using OMA 11, which will require local manual operation of the valve. The license further stated that in the event that IA is not lost, ADV 2–MS–190B and AFW flow control valve 2–FW–43B can be operated from Fire Shutdown Panel C–10.

The licensee further stated that once the BASTs are depleted, Operators switch over to the RWST. The licensee further stated that due to fire damage, the 2–CH–192 valve may spuriously close and that in order to establish the RWST as the suction path for the charging system, an OMA is required to open valve 2–CH–192 (OMA 1) prior to BAST depletion. OMA 1 establishes the RWST as the suction supply for the charging system and is not conducted until after AFW is established which takes 17 minutes.

A.3.4.4 OMA Timing

The licensee stated that the OMA for restoring charging (OMA 1) requires 32 minutes to complete and that the available time is 72 minutes, which results in 40 minutes of margin. The licensee also stated that the OMA for establishing AFW from Fire Shutdown Panel C–10 (OMA 9) requires 10 minutes to complete and that the time available is 45 minutes, leaving a margin of 35 minutes. AFW flow is established from the CR within the required 45-minute time period and should IA be lost, the OMA to continue decay heat removal can be conducted beginning 17 minutes after AFW flow is established (OMA 11).

A.3.5 Conclusion

Given the limited amount of combustible materials and ignition sources and installed detection, it is unlikely that a fire would occur and go undetected or unsuppressed by the personnel and damage the safe shutdown equipment. The low likelihood of damage to safe shutdown equipment due to a fire in this area, combined with the ability of the OMAs to manipulate the plant in the event of a fire that damages safe shutdown equipment and to be completed with more than 30 minutes of margin, provides adequate assurance that safe shutdown capability is maintained.

A.4 Fire Area R–14, Lower 6.9 and 4.16 kV Switchgear Room, East Cable Vault

A.4.1 Fire Prevention

The licensee stated that the areas have low combustible loading that predominantly consists of cable insulation and Thermo-Lag fire resistant wrap, and that potential ignition sources include electrical faults.

A.4.2 Detection, Control, and Extinguishment

The licensee stated that the lower 6.9 and 4.16kV switchgear room contain ionization smoke detectors located directly over each switchgear cabinet that alarm at the main fire alarm panel in the CR. The licensee also stated that a fire in the lower 6.9 and 4.16 kV switchgear room that could potentially impact cables of concern would likely involve cable insulation resulting from an electrical fault in one of the cable trays routed over bus 24E or failure of bus 24E itself, and that combustibles in this area consist predominantly of IEEE 383 qualified cable insulation or cable that has been tested and found to have similar fire resistive characteristics. The licensee further stated that since there is a minimal amount of Class A combustibles in this area, there is little chance of a fire occurring outside of a switchgear failure, which could act as a pilot ignition source for the cable insulation, and that a switchgear failure normally results in a high intensity fire that lasts for a short duration, which makes it unlikely that it will cause sustained combustion of IEEE 383 qualified cables. The licensee further stated that in the unlikely event of a fire, it would be rapidly detected by the ionization smoke detection system installed in the area and that the smoke detection system, which consists of an ionization smoke detector located directly over each switchgear cabinet in the area, will aid in providing prompt fire brigade response.

The licensee stated that the east cable vault is provided with an automatic wet-pipe sprinkler system designed to protect structural steel and an ionization smoke detection system that alarms at the main fire alarm panel in the CR. The licensee also stated that the vertical cable chase that leads down the AB cable vault is protected by an automatic deluge spray system, which is actuated by cross-zoned smoke detection system that alarms at a local panel and at the

main fire alarm panel in the CR. The licensee further stated that a fire in the area that could potentially impact any cables of concern would likely involve cable insulation resulting from an electrical fault and that combustibles in this area consist predominantly of IEEE 383 qualified cable insulation or cable that has been tested and found to have similar fire resistive characteristics. The licensee further stated that since there is a minimal amount of Class A combustibles in this area, there is little chance of a fire occurring that could act as a pilot ignition source for the cable insulation. The licensee further stated that Thermo-Lag, while considered combustible, is 1-hour fire-rated in this area and that based on its fire resistive qualities and lack of ignition sources, a fire involving Thermo-Lag wrap is not credible. The licensee further stated that in the event of a fire in this area, it would be rapidly detected in its incipient stage by the installed smoke detection system, which will aid in providing rapid response by the fire brigade and that in the unlikely event the fire advanced beyond its incipient stage (unlikely based on type of cable insulation and fire brigade suppression activities), it would actuate the installed automatic wet-pipe suppression system provided in this area, which will, at a minimum, provide reasonable assurance that a cable tray fire in this area will be controlled and confined to the immediate area of origin.

A.4.3 Preservation of Safe Shutdown Capability

The licensee stated that a fire in the Facility Z1 lower 4.16kV switchgear room and cable vault will affect all Facility Z1 shutdown components, that Facility Z2 is used to achieve and maintain Hot Standby, that plant shutdown to Hot Standby can be accomplished using an AOP, and that OMAs are required to provide decay heat removal and restore charging system flow to the RCS.

The licensee stated that the cables of concern in the east cable vault are the control and indication cabling for valve 2–FW–43B. The licensee also stated that cables for valves 2–CH–192, 2–CH–508, and 2–CH–509 are not located in this room; however, valves 2–CH–508 and 2–CH–509 are impacted due to the potential loss of the feed cables for bus 22E or the ''A'' EDG's control and power cables, which results in the loss of power to the valves.

A.4.4 OMAs Credited for a Fire in This Area

The licensee stated that OMAs 1, 9, and 11 are credited for a fire originating in Fire Area R–13 in order to provide decay heat removal and restore charging system flow to RCS in the event of cable damage or loss of IA.

A.4.4.1 AFW and Charging System Flow

A.4.4.1.1 OMAs 1, 9, and 11 Open Valve 2–CH–192, Control AFW Flow Valve 2–FW–43B, and Control Valve 2–MS–190B at Panel C10 or Local Manual Operation

The licensee stated that establishing AFW flow to the credited SG is required to be accomplished within 45 minutes and that the required flow path utilizes the TDAFW pump. The licensee also stated that prior to AFW initiation, the plant is placed in the Hot Standby condition by steaming through the MSSVs and that after AFW is established from the CR, operation of the ADV (2–MS–190B) (OMA 11) is the required method of removing decay heat to maintain Hot Standby and transition to Cold Shutdown. The licensee further stated that there is no cable damage from fire to the required ADV (2–MS–190B); however, the fire may cause a loss of IA, which is required to operate the ADVs to support decay heat removal. The licensee stated that upon a loss of air, the ADV will fail closed and that this design prevents excessive RCS cooldown prior to AFW start and, therefore, in the event of a loss of IA, Operators will establish local manual control of 2–MS–190B after AFW flow is established. The licensee further stated that PEO–2 will remain with the ADV to modulate steam flow per direction from the CR and that after restoration of the charging system, the BASTs are credited for maintaining RCS inventory and that the BASTs have a minimum level specified in the TRM, which ensures 72 minutes of flow.

The licensee stated that a loss of IA or power causes AFW flow control valve 2–FW–43B to fail open. However, the licensee also stated that the circuit can be isolated and controlled from Fire Shutdown Panel C–10. Therefore, OMA 9 is required to isolate the damaged cables and operate the TDAFW turbine speed control to maintain level in the SG with AFW flow control valve 2–FW–43B failed open. After AFW flow is established, the licensee stated that the steam release path from the SG may be switched from the MSSVs to ADV 2–MS–190B using OMA 11, which will require local manual operation of the valve. In the event that IA is not lost, ADV 2–MS–190B and AFW flow control valve 2–FW–43B can be operated from Fire Shutdown Panel C–10.

The licensee further stated that once the BASTs are depleted, Operators switch over to the RWST. The licensee further stated that due to fire damage, the 2–CH–192 valve may spuriously close and that in order to establish the RWST as the suction path for the charging system, an OMA is required to open valve 2–CH–192 (OMA 1) prior to BAST depletion. OMA 1 establishes the RWST as the suction supply for the charging system and is not conducted until after AFW is established, which takes 17 minutes.

A.4.4.2 OMA Timing

The licensee stated that the OMA for restoring charging (OMA 1) requires 32 minutes to complete and that the available time is 72 minutes, which results in 40 minutes of margin. The licensee also stated that the OMA for establishing AFW from Fire Shutdown Panel C–10 (OMA 9) requires 4 minutes to complete and that the time available is 45 minutes, which results in 41 minutes of margin. AFW flow is established from the CR within the required 45-minute time period and should IA be lost, the OMA to continue decay heat removal can be conducted beginning 17 minutes after AFW flow is established (OMA 11).

A.4.5 Conclusion

Given the limited amount of combustible materials and ignition sources and installed detection (lower 6.9 and 4.16 kV switchgear room) and installed detection and suppression (east cable vault), it is unlikely that a fire would occur and go undetected or unsuppressed by the personnel and damage the safe shutdown equipment. The low likelihood of damage to safe shutdown equipment due to a fire in this area, combined with the ability of the OMAs to manipulate the plant in the event of a fire that damages safe shutdown equipment and to be completed with more than 30 minutes of margin, provides adequate assurance that safe shutdown capability is maintained.

A.5 Feasibility and Reliability of the Operator Manual Actions

The licensee stated that the means to safely shut down Millstone 2 in the event of a fire that does occur and is not rapidly extinguished, as expected, has been documented in the 10 CFR part 50, appendix R report. The entire appendix R report was not reviewed by the NRC as part of this exemption; the relevant information was submitted on the docket in the letters identified above. The sections below outline the

licensee's basis for the OMA's feasibility and reliability.

The NUREG–1852, ''Demonstrating the Feasibility and Reliability of Operator Manual Actions in Response to Fire'' (ADAMS Accession No. ML073020676), provides criteria and associated technical bases for evaluating the feasibility and reliability of post-fire OMAs in nuclear power plants. The following provides the Millstone 2 analysis of these criteria for justifying the OMAs specified in this exemption.

A.5.1 Bases for Establishing Feasibility and Reliability

The licensee stated that in establishing the assumed times for Operators to perform various tasks, a significant margin (*i.e.,* a factor of two) was used with respect to the required time to establish the system function for all fire area scenarios identified in the exemption request. The licensee also stated that confirmation times for valve/breaker manipulations were included in the action time for the OMAs. The licensee also stated that for valves that are operated in the field, if they are being manually opened or closed, there is local indication, plus the mechanical stops to confirm valve operation, and for valves that are throttled, the field Operator is in communication with the CR personnel who monitor control board indication to confirm the proper response. The licensee further stated that all breakers have local mechanical indication for position verification, that all sequenced steps are coordinated from the CR, and that the OMA times listed include this coordination.

A.5.2 Environmental Factors

The licensee stated that a review of ventilation systems for the fire areas addressed by the exemption request concluded that no credible paths exist that could allow the spread of products of combustion from the area of fire origin to an area that either serves as a travel path for OMAs or is an action location for an OMA. The licensee also stated that the installed ventilation systems are not used to perform smoke removal activity for the fire areas discussed in the exemption request and that smoke evacuation for these areas would be accomplished by the site fire brigade utilizing portable mechanical ventilation.

The licensee stated that the performance of all the OMAs for each of the fire areas has specific safe pathways for access and egress and that in all cases, emergency lighting units have been provided to ensure adequate lighting. The licensee also stated that during a fire event, implementation of CR actions ensure the radiation levels along these pathways, and at the location of the OMAs, are within the normal and expected levels.

The licensee stated that area temperatures may be slightly elevated due to a loss of normal ventilation; however, in no case would the temperatures prevent access along the defined routes or prevent the performance of an OMA. The licensee further stated that the most limiting time estimate is 72 minutes of charging system operation injecting the contents of the BASTs based on the tanks being at the TRM minimum level at the start of the event, and that during the event, charging may be lost or secured, and RCS inventory can meet the 10 CFR part 50, appendix R performance goal for 180 minutes. The licensee further stated that analysis indicates that valve 2–CH–192 may not need to be opened until 252 minutes into the event.

The licensee stated that fire barrier deviations that could allow the spread of products of combustion of a fire to an adjacent area that either serves as a travel path for OMAs or is an action location for an OMA have been found to not adversely impact OMA travel paths or action areas.

A.5.3 Equipment Functionality and Accessibility

The licensee stated that as part of the OMA validation process, lighting, component labeling, accessibility of equipment, tools, keys, flashlights, and other devices or supplies needed are verified to ensure successful completion of the OMA.

The licensee stated that for each OMA, the current Millstone 2 10 CFR part 50, appendix R report indicates that Operator access is assured by an alternate path, or access is not required until after the fire has been suppressed. Where applicable, the licensee stated that OMAs have sufficient emergency lighting units to provide for access to the particular component and to perform the task.

A.5.4 Available Indications

Indicators and indication cables have been evaluated by the licensee as part of the exemption request process. Where impacts to indication have been identified, the licensee provided an alternate method to obtain the needed indication(s).

A.5.5 Communications

The licensee stated that Operators are provided with dedicated radio communication equipment and that the 10 CFR part 50, appendix R communication system utilizes a portion of the Millstone 800 megahertz (MHz) trunked radio system, which consists of 800 MHz portable radio units, a CR base station transmitter, antennas, a main communication console located inside the CR, and redundant repeaters. The licensee also stated that the CR base station transmitter is provided to ensure two-way voice communications with the CR, without affecting plant safety systems that may have sensitive electronic equipment located in the area, and the resulting design configuration ensures communications capability for all 10 CFR part 50, appendix R fire scenarios.

A.5.6 Portable Equipment

The licensee stated that all equipment required to complete a required action is included in a preventative maintenance program and is also listed in the TRM, which identifies surveillances for the equipment utilized in each OMA.

A.5.7 Personnel Protection Equipment

The licensee stated that there are no OMAs required in fire areas identified in the exemption request that necessitate the use of self-contained breathing apparatus. No fire areas necessitate reentry to the area of fire origin.

A.5.8 Procedures and Training

The licensee stated that entry into its AOP for ''FIRE'' is at the first indication of a fire from a panel alarm or report from the field and if the fire is in a 10 CFR part 50, appendix R area, the shift is directed to determine if a fire should be considered a fire subject to 10 CFR part 50, appendix R (*i.e.,* requiring use of the appendix R AOPs) by:

1. Identifying actual or imminent damage to safe shutdown components, switchgear, motor control centers, cable trays, or conduit runs;

2. Observation of spurious operation of plant components needed for safe shutdown;

3. Observation of loss of indication, control, or function of safe shutdown plant systems or components;

4. Observation of conflicting instrument indication for safe shutdown systems or components; or

5. Observation of parameters associated with safe shutdown systems or components not being within expected limits for the existing plant configuration.

The licensee stated that its AOP for ''FIRE'' has various attachments that have 10 CFR part 50, appendix R egress/access routes that provide a safe pathway to reach the required equipment necessary to complete the

OMAs and that it has confirmed that the pathways will be free of hazards to the Operators due to the subject fire.

The licensee also stated that there is a 10 CFR part 50, appendix R AOP corresponding to each appendix R fire area, which is entered when an appendix R fire is declared, and that Operations personnel train to those AOPs, which identify the steps to perform each OMA. The licensee further stated that time-critical OMAs are also identified within operating procedures, which require that Operations personnel train to perform these time-critical activities and that the OMAs presented in this exemption request are encompassed in the time-critical procedure.

The licensee further stated that Operations personnel train to these procedures and the AOPs identify the steps to perform each OMA. The licensee further stated that the times allotted to perform these tasks are easily achieved by experienced and inexperienced Operators during training sessions, evaluated requalification training, and supervised walkdowns, and that for each case, there is sufficient margin to account for the uncertainties associated with stress, environmental factors, and unexpected delays.

A.5.9 Staffing

The licensee stated that the Operations shift staffing requirements include one additional licensed or non-licensed Operator over the minimum technical specification requirement to be on duty each shift during Modes 1, 2, 3, or 4, and that this Operator is designated as the 10 CFR part 50, appendix R Operator and is specified in the TRM. The licensee also stated that the number of individuals available to respond to the OMAs is one RO, two PEOs, and one additional licensed or non-licensed individual (10 CFR part 50, appendix R Operator). The licensee stated that the exemption request allocated tasks to PEO–1, PEO–2, PEO–3, and RO–1, and that one of the three PEOs would be the TRM required 10 CFR part 50, appendix R Operator, and with the exception of the panel C10 activities, the assignments are interchangeable between the four Operators, and since these individuals are specified by the technical specification and TRM, they are not members of the fire brigade and have no other collateral duties.

The licensee stated that Millstone 2 has a station emergency response organization (SERO) and appropriate emergency response facilities, and that declaration of an ALERT (events that are in progress or have occurred and involving an actual or potential substantial degradation of the level of safety of the plant, with releases expected to be limited to small fractions of the Environmental Protection Agency Protective Action Guideline exposure levels) activates the SERO organization, which is immediately staffed by on-site personnel and is fully established with on-call personnel within 60 minutes of the ALERT being declared. The licensee also stated that after this time, off-shift Operations staff (*e.g.,* personnel in training, performing administrative functions, etc.) may be called in as requested by the Shift Manager. The licensee further stated that many of the OMAs are not required prior to the establishment of SERO and that the additional staff available through SERO will improve the reliability of these OMAs.

The licensee stated that Operators are required and assumed to be within the protected area and that the time lines account for the initial response by the field Operator. The licensee also stated that upon the announcement of a fire, the field Operators are directed to report to the CR and await further directions and that initially, upon a report of a fire, the CR Operators enter their AOP for ''FIRE.'' The licensee further stated that the flow path to get into a 10 CFR part 50, appendix R fire scenario is that upon indication of a fire the fire brigade is dispatched and, based on the report or indications in the CR, an appendix R fire may be declared, and in the development of the time lines, the Operators are allowed 5 minutes to respond and report to the CR.

A.5.10 Demonstrations

The licensee provided its validation process for the OMAs included in the exemption request. The validation process included the following: (1) Validation objectives, (2) validation frequency, (3) validation methods, (4) validation attributes, and (5) validation performance.

The licensee stated that all OMAs are encompassed in its operating procedures and that an enhancement to the tracking and training on time-critical activities has been developed and is currently being implemented.

The licensee stated that all of the OMAs identified are contained in the AOPs to respond to a 10 CFR part 50, appendix R fire and that during initial validation of these procedures, the OMAs were performed, and all of the time performance objectives were met as a result of the validation.

A.5.11 Feasibility Summary

The licensee's analysis demonstrates that, for the expected scenarios, the OMAs can be diagnosed and executed within the amount of time available to complete them. The licensee's analysis also demonstrates that various factors, including the factor of two times margin, the use of the minimum BAST inventory, and the use of the CST inventory, have been considered to address uncertainties in estimating the time available. Therefore, the OMAs included in this review are feasible because there is adequate time available for the Operator to perform the required OMAs to achieve and maintain hot shutdown following a postulated fire event. Where a diagnosis time has been identified, it is included as part of the required time for a particular action. Where an action has multiple times or contingencies associated with the ''allowable'' completion time, the lesser time is used. This approach is considered to represent a conservative approach to analyzing the timelines associated with each of the OMAs with regard to the feasibility and reliability of the actions included in this exemption. All OMAs have at least 30 minutes of margin. Margin is based on using the most limiting information from the licensee; for example, if the licensee postulated a range of time for diagnosis, the required time includes the largest number in the range.

The completion times indicate reasonable assurance that the OMAs can reliably be performed under a wide range of conceivable conditions by different plant crews because it, in conjunction with the time margins associated with each action and other installed fire protection features, accounts for sources of uncertainty such as variations in fire and plant conditions, factors unable to be recreated in demonstrations and human-centered factors.

Finally, these numbers should not be considered without the understanding that the manual actions are a fallback, in the unlikely event that the fire protection DID features are insufficient. In most cases, there is no credible fire scenario that would necessitate the performance of these OMAs. The licensee provided a discussion of the activity completion times and associate margins related to the OMAs.

A.5.12 Reliability

A reliable action is a feasible action that is analyzed and demonstrated as being dependably repeatable within an available time. The above criteria, Sections 3.5.1 through 3.5.10, provide

the NRC staff's basis that the actions are feasible. Section 3.5.11 provides a discussion of the available time margin. The licensee provided a basis that the actions were reliable based on the available time margin; the administrative controls such as procedures, staffing levels, and availability of equipment; and by accounting for uncertainty in fires and plant conditions. Therefore, the OMAs included in this review are reliable because there is adequate time available to account for uncertainties not only in estimates of the time available, but also in estimates of how long it takes to diagnose a fire and execute the OMAs (*e.g.,* as based, at least in part, on a plant demonstration of the actions under non-fire conditions). For example, OMA 1 establishes the RWST as the suction supply for the charging system and is not conducted until after AFW is established. Further, since the BASTs have a minimum TRM specified inventory to ensure 72 minutes of flow, OMA 1 can be completed with 40 minutes of margin.

A.6 Summary of DID and Operator Manual Actions

In summary, the DID concept for a fire in the fire areas discussed above provides a level of safety that results in the unlikely occurrence of fires, rapid detection, control, and extinguishment of fires that do occur and the protection of SSCs important to safety. As discussed above, the licensee has provided preventative and protective measures in addition to feasible and reliable OMAs that, together, demonstrate the licensee's ability to preserve or maintain safe shutdown capability in the event of a fire in the analyzed fire areas.

B. Authorized by Law

This exemption would allow Millstone 2 to rely on OMAs, in conjunction with the other installed fire protection features, to ensure that at least one means of achieving and maintaining hot shutdown remains available during and following a postulated fire event as part of its fire protection program, in lieu of meeting the requirements specified in 10 CFR part 50, appendix R, section III.G.2, for a fire in the analyzed fire areas. As stated above, § 50.12 allows the NRC to grant exemptions from the requirements of 10 CFR part 50. The NRC staff has determined that granting of this exemption will not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission's regulations. Therefore, the exemption is authorized by law.

C. No Undue Risk to Public Health and Safety

The underlying purpose of 10 CFR part 50, appendix R, section III.G, is to ensure that at least one means of achieving and maintaining hot shutdown remains available during and following a postulated fire event. Based on the above, no new accident precursors are created by the use of the specific OMAs, in conjunction with the other installed fire protection features, in response to a fire in the analyzed fire areas. Therefore, the probability of postulated accidents is not increased. Also, based on the above, the consequences of postulated accidents are not increased. Therefore, there is no undue risk to public health and safety.

D. Consistent With the Common Defense and Security

This exemption would allow Millstone 2 to credit the use of the specific OMAs, in conjunction with the other installed fire protection features, in response to a fire in the analyzed fire areas discussed above, in lieu of meeting the requirements specified in 10 CFR part 50, appendix R, section III.G.2. This change, to the operation of the plant, has no relation to security issues. Therefore, the common defense and security is not diminished by this exemption.

E. Special Circumstances

One of the special circumstances described in § 50.12(a)(2)(ii) is that the application of the regulation is not necessary to achieve the underlying purpose of the rule. The underlying purpose of 10 CFR part 50, appendix R, section III.G, is to ensure that at least one means of achieving and maintaining hot shutdown remains available during and following a postulated fire event. While the licensee does not comply with the explicit requirements of 10 CFR part 50, appendix R, section III.G.2, specifically, it does meet the underlying purpose of section III.G as a whole by ensuring that safe shutdown capability remains available through the combination of DID and OMAs. Therefore, special circumstances exist that warrant the issuance of this exemption as required by § 50.12(a)(2)(ii).

IV. Conclusion

Based on the all of the features of the DID concept discussed above, the NRC staff concludes that the use of the requested OMAs, in these particular instances and in conjunction with the other installed fire protection features, in lieu of strict compliance with the requirements of 10 CFR part 50, appendix R, section III.G.2, is consistent with the underlying purpose of the rule. As such, the level of safety present at Millstone 2 is commensurate with the established safety standards for nuclear power plants.

Accordingly, the Commission has determined that, pursuant to § 50.12(a), the exemption is authorized by law, will not present an undue risk to the public health and safety, is consistent with the common defense and security and that special circumstances are present to warrant issuance of the exemption. Therefore, the Commission hereby grants Dominion an exemption from the requirements of 10 CFR part 50, appendix R, section III.G.2, to utilize the OMAs discussed above at Millstone 2.

Pursuant to § 51.32, an environmental assessment and finding of no significant impact related to this exemption was published in the **Federal Register** on September 28, 2017 (82 FR 45322). Based upon the environmental assessment, the Commission has determined that the granting of this exemption will not have a significant effect on the quality of the human environment.

This exemption is effective upon issuance of this **Federal Register** notice.

Dated at Rockville, Maryland, this 24th day of October, 2017.

For the Nuclear Regulatory Commission.

Eric J. Benner,

Deputy Director, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation.

[FR Doc. 2017–23427 Filed 10–26–17; 8:45 am]

BILLING CODE 7590–01–P

OFFICE OF PERSONNEL MANAGEMENT

Excepted Service

AGENCY: U.S. Office of Personnel Management (OPM).

ACTION: Notice.

SUMMARY: This notice identifies Schedule A, B, and C appointing authorities applicable to a single agency that were established or revoked from February 1, 2017 to February 28, 2017.

FOR FURTHER INFORMATION CONTACT: Senior Executive Resources Services, Senior Executive Service and Performance Management, Employee Services, (202) 606–2246.

SUPPLEMENTARY INFORMATION: In accordance with 5 CFR 213.103, Schedule A, B, and C appointing authorities available for use by all agencies are codified in the Code of Federal Regulations (CFR). Schedule A,