- c. A verification or coding system for emergency messages between Vermont Yankee and the state police headquarters of the respective states and the Commonwealth.
- 14. Vermont Yankee shall furnish advance notification to MDPH, or to another Commonwealth agency designated by MDPH, of the time, method and proposed route through the Commonwealth of any shipments of nuclear fuel and wastes to and from the Vermont Yankee facility which will utilize railways or roadways in the Commonwealth.

A-43 1.13.78 The licensee may proceed with and is required to complete the modifications identified in Paragraph 3.1.1 through 3/1.20 of the NRC's Fire Protection Safety Evaluation (SE) on the facility dated January 13, 1978. These modifications shall be completed as specified in Table 3.1 of the SE. In addition, the licensee shall submit the additional information identified in Table 3.2 of this SE in accordance with the schedule contained therein. In the event these dates for submittal capnot be met, the licensee shall submit a report, explaining the circumstances, together with a revised schedule.

#### 3.G.// Security Plan

A-107 8.25.88 10.20.88 The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10CFR73.55 (51FR27817 and 27822) and to the authority of 10CFR50.90 and 10CFR50.54(p). The plans, which contain Safeguards Information protected under 10CFR73.21, are entitled: "Vermont Yankee Nuclear Power Station Physical Security Plan," with revisions submitted through March 16, 1988; "Vermont Yankee Nuclear Power Station Training and Qualification Plan," with revisions submitted through November 10, 1982; and "Vermont Yankee Nuclear Power Station Safeguards Contingency Plan," with revisions submitted through December 30, 1985. Changes made in accordance with 10CFR73.55 shall be implemented in accordance with the schedule set forth therein.

3.H. This Paragraph Deleted

9901280057 990122 PDR ADOCK 05000271 PDR

#### 1.0 DEFINITIONS

#### 1.0 DEFINITIONS

The succeeding frequently used terms are explicitly defined so that a uniform interpretation of the specifications may be achieved.

- A. Reportable Occurrence The equivalent of a reportable event which shall be any of the conditions specified in Section 50.73 to 10CFR Part 50.
- B. Alteration of the Reactor Core The act of moving any component affecting reactivity within the reactor vessel in the region above the core support plate, below the upper grid and within the shroud. Normal movement of control rods or neutron detectors, or the replacement of neutron detectors is not defined as a core alteration.
- C. Hot Standby Hot standby means operation with the reactor critical and the main steam line isolation valves closed.
- D. Immediate Immediate means that the required action will be initiated as soon as practicable considering the safe operation of the unit and the importance of the required action.
- E. Instrument Calibration An instrument calibration means the adjustment of an instrument signal output so that it corresponds, within acceptable range and accuracy, to a known value(s) of the parameter which the instrument monitors. Calibration shall encompass the entire instrument including actuation, alarm, or trip. Response time as specified is not part of the routine instrument calibration but will be checked once per operating cycle.
- F. Instrument Check An instrument check is qualitative determination of acceptable operability by observation of instrument behavior during operation. This determination shall include, where possible, comparison of the instrument with other independent instruments measuring the same variable.
- G. Instrument Functional Test An instrument functional test shall be:
  - Analog channels the injection of a signal into the channel as close to the sensor as practicable to verify operability including alarm and/or trip functions.
  - Bistable channels the injection of a signal into the sensor to verify the operability including alarm and/or trip functions.
- H. Log System Functional Test A logic system functional test means a test of all relays and contacts of a logic circuit from sensor to activated device to insure all components are operable per design intent. Where possible, action will go to completion, i.e., pumps will be started and valves opened.
- I. Minimum Critical Power Ratio The minimum critical power ratio is defined as the ratio of that power in a fuel assembly which is calculated to cause some point in that assembly to experience boiling transition as calculated by application of the appropriate NRC-approved critical power correlation to the actual assembly operating power.
- J. Mode The reactor mode is that which is established by the mode-selector-switch.

Relocated from Page

- I. Minimum Critical Power Ratio The minimum critical power ratio is defined as the ratio of that power in a fuel assembly which is calculated to cause some point in that assembly to experience boiling transition as calculated by application of the appropriate NRC-approved critical power correlation to the actual assembly operating power.
- J. <u>Mode</u> The reactor mode is that which is established by the mode-selector-switch.
- K. Operable A system, subsystem, train, component or device shall be operable or have operability when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).
- L. Operating Operating means that a system or component is performing its intended functions in its required manner.
- Operating Cycle Interval between the end of one refueling outage and the end of the next subsequent refueling outage.
- N. Primary Containment Integrity Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:
  - All manual containment isolation valves on lines connecting to the reactor coolant system or containment, which are not required to be open during accident conditions, are closed. Such valves may be opened intermittently under administrative controls.
  - 2. At least one door in each airlock is closed and sealed.
  - All automatic containment isolation valves are operable or deactivated in the isolated position.
  - 4. All blind flanges and manways are closed.

#### O. Protective Instrumentation Definitions

- Instrument Channel An instrument channel means an arrangement of a sensor and auxiliary equipment required to generate and transmit to a trip system a single trip signal related to the plant parameter monitored by that instrument channel.
- 2. Trip System A trip system means an arrangement of instrument channel trip signals and auxiliary equipment required to initiate action to accomplish a protective trip function. A trip system may require one or more instrument channel trip signals related to one

or more plant parameters in order to initiate trip system action. Initiation of protective action may require the tripping of a single trip system or the coincident tripping of two trip systems.

- Protective Action An action initiated by the protection system when a limit is reached. A protective action can be at a channel or system level.
- 4. Protective Function A system protective action which results from the protective action of the channels monitoring a particular plant condition.
- P. Rated Neutron Flux Rated neutron flux is the neutron flux that corresponds to a steady state power level of 1593 thermal megawatts.
- Q. Rated Thermal Power Rated thermal power means a steady state power level of 1593 thermal megawatts.
- R. Reactor Power Operation Reactor power operation is any operation with the mode switch in the "Startup/Hot Standby" or "Run" position with the reactor critical and above 1% rated thermal power.
  - Startup/Hot Standby Mode In this mode the low turbine condenser volume trip is bypassed when condenser vacuum is less than 12 inches Hg and both turbine stop valves and bypass valves are closed; the low pressure and the 10 percent closure main steamline isolation valve closure trips are bypassed; the reactor protection system is energized with IRM neutron monitoring system trips and control rod withdrawal interlocks in service and APRM neutron monitoring system operable.
  - 2. Run Mode In this mode the reactor system pressure is equal to or greater than 800 psig and the reactor protection system is energized with APRM protection and RBM interlocks in service.
- S. <u>Reactor Vessel Pressure</u> Unless otherwise indicated, reactor vessel pressures listed in the Technical Specifications are those measured by the reactor vessel steam space detector.
- T. Refueling Outage Refueling outage is the period of time between the shutdown of the unit prior to a refueling and the startup of the plant subsequent to that refueling. For the purpose of designating frequency of testing and surveillance, a refueling outage shall mean a regularly scheduled refueling outage; however, where such outages occur within 8 months of the completion of the previous refueling outage, the required surveillance testing need not be performed until the next regularly scheduled outage.
- U. <u>Secondary Containment Integrity</u> Secondary containment integrity means that the reactor building is intact and the following conditions are met:
  - 1. At least one door in each access opening is closed.

#### 1.0 DEFINITIONS

- 2. The standby gas treatment system is operable.
- 3. All reactor building automatic ventilation system isolation valves are operable or are secured in the isolated position.
- V. Shutdown The reactor is in a shutdown condition when the reactor mode switch is in the shutdown mode position and no core alterations are being performed. When the mode switch is placed in the shutdown position a reactor scram is initiated, power to the control rod drives is removed, and the reactor protection system trip systems are de-energized.
  - 1. Hot Shutdown means conditions as above with reactor coolant temperature greater that 212°F.
  - 2. Cold Shutdown means conditions as above with reactor coolant temperature equal to or less than 212°F.
  - 3. Shutdown means conditions as above such that the effective multiplication factor  $(K_{\rm eff})$  of the core shall be less than 0.99.
- W. <u>Simulated Automatic Actuation</u> <u>Simulated automatic actuation means applying a simulated signal to the sensor to actuate circuit in question.</u>
- X. Transition Boiling Transition boiling means the boiling regime between nucleate and film boiling. Transition boiling is the regime in which both nucleate and film boiling occur intermittently with neither type being completely stable.
- Y. Surveillance Frequency Unless otherwise stated in these specifications, periodic surveillance tests, checks, calibrations, and examinations shall be performed within the specified surveillance intervals. These intervals may be adjusted plus 25%. The operating cycle interval is considered to be 18 months and the tolerance stated above is applicable.
- Z. Surveillance Interval The surveillance interval is the calendar time between surveillance tests, checks, calibrations, and examinations to be performed upon an instrument or component when it is required to be operable. These tests unless otherwise stated in these specifications may be waived when the instrument, component, or system is not required to be operable, but these tests shall be performed on the instrument, component, or system prior to being required to be operable.
- AA. Deleted
- BB. Source Check The qualitative assessment of channel response when the channel sensor is exposed to a radioactive source.
- CC. <u>Dose Equivalent I-131</u> The dose equivalent I-131 shall be that concentration of I-131 (microcurie/gram) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134 and I-135 actually present. The thyroid dose conversion

Retreated from Pay 4

factors used for this calculation shall be those listed in NRC Regulatory Guide 1.109, Revision 1, October 1977.

- DD. <u>Solidification</u> Solidification shall be the conversion of wet wastes into a form that meets shipping and burial ground requirements. Suitable forms include dewatered resins and filter sludges.
- EE. Deleted
- FF. Site Boundary The site boundary is shown in Figure 2.2-5 in the FSAR.
- GG. Deleted
- HH. Deleted
- II. Off-Site Dose Calculation Manual (ODCM) A manual containing the current methodology and parameters used in the calculation of off-site doses due to radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm/trip setpoints, and in the conduction of the environmental radiological monitoring program.
- JJ. Process Control Program (PCP) A process control program shall contain the sampling, analysis, tests, and determinations by which wet radioactive waste from liquid systems is assured to be converted to a form suitable for off-site disposal.
- KK. Gaseous Radwaste Treatment System The Augmented Off-Gas System (AOG) is the gaseous radwaste treatment system which has been designed and installed to reduce radioactive gaseous effluents by collecting primary coolant system off-gases from the primary system and providing for delay or holdup for the purpose of reducing the total radioactivity prior to release to the environment.
- LL. Ventilation Exhaust Treatment System The Radwaste Building and AOG Building ventilation HEPA filters are ventilation exhaust treatment systems which have been designed and installed to reduce radioactive material in particulate form in gaseous effluents by passing ventilation air through HEPA filters for the purpose of removing radioactive particulates from the gaseous exhaust stream prior to release to the environment. Engineered safety feature atmospheric cleanup systems, such as the Standby Gas Treatment (SBGT) System, are not considered to be ventilation exhaust treatment system components.
- MM. Vent/Purging Vent/Purging is the controlled process of discharging air or gas from the primary containment to control temperature, pressure, humidity, concentration or other operating conditions.
- NN. Core Operating Limits Report The Core Operating Limits Report is the unit-specific document that provides core operating limits for the current operating reload cycle. These cycle-specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.7.A.4. Plant operation within these operating limits is addressed in individual specifications.

#### 4.13 SURVEILLANCE REQUIREMENTS

## cell plates and battery racks show no visual indication of physical damage or abnormal deterioration, and

The batteries,

# The battery-tobattery and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.

#### C. Fire Hose Stations

- 1. Except as specified in 3.13.C.2 below, all hose stations inside the Reactor Building, Turbine Building, and those inside the Administration Building which provided coverage of the Control Room Building shall be operable whenever equipment in the areas protected by the fire hose stations is required to be operable.
- 2. With one or more of the fire hose stations specified in 3.13.C.1 above inoperable, route an additional equivalent capacity fire hose to the unprotected area(s) from an operable hose station within one hour.

#### Fire Hose Stations

- Each fire hose station shall be verified to be operable:
  - a. At least monthly by visual inspection of the station to assure all equipment is available.
  - b. At least once each
    18 months by
    removing the hose
    for inspection and
    replacing degraded
    coupling gaskets and
    repracking.
  - c. At least once each year by hydro-statically testing each outside hose at 250 lbs.
  - d. At least once per 3 years by hydro-statically testing inside hose at 150 lbs.

#### D. CO Systems

- 1. Except as specified in Specification 3.13.D.2, the CO<sub>2</sub> systems located in the cable vault, east and west switchgear rooms, and diesel fire pump day tank room shall be operable, whenever equipment in the area protected by the system is required to be operable.
- 2. From and after the date that the CO2 system in the cable vault or a switchgear room is inoperable, within one hour a fire watch shall be established to inspect the location at least or se every hour, provided that the fire detection system is operable in accordance with 3.13.A. If the fire detection system, is also inoperable, within one hour a continuous fire watch shall be established with backup fire suppression equipment. Restore the Co2 system to operable status within 14 days or submit a peport within the next 30 days to the Commission as specified in 6.7/C.2 outlining the cause of inoperability and the plans for restoring the CO2 system to operable status.

e. At least once per 3 years, partially open hose station valves to verify valve operability and no blockage.

#### D. CO2 Systems

- The CO<sub>2</sub> systems located in the cable vault, east and west switchgear rooms, and diesel fire pump day tank room shall be demonstrated operable.
  - a. At least once per six months by verifying each CO<sub>2</sub> cylinder associated with the cable vault and diesel fire pump day tank room CO<sub>2</sub> systems does not contain less than 90% of its initial charge.
  - b. At least once per 18 months by verifying that the system, including associated ventilation dampers, will actuate automatically to a simulated actuation signal.
    - At least once per operating cycle a flow path test shall be performed to verify flow through each nozzle.
  - d. At least once per .7 days by verifying the CO<sub>2</sub> storage tank associated with the switchgear rooms does not contain less than 50% level and a minimum pressure of 270 psig.

#### G. Foam Systems

- 1. Except as specified in Specification 3.13.G.2 below, the Recirculation M.G. Set Foam System shall be operable with its foam concentrate tank full (150 gallons) whenever the Recirculation M.G. Sets are operating.
- 2. From and after the date that the Redirculation M.G. Set Foam System is inoperable, a fire watch shall be established to inspect the location at least once every hour; and a foam nozzle shall be brought to the Reactor Building elevation containing the Recirculation M.G. Sets. A 150 gallon foam concentrate supply shall be available on site.
- 3. Except as specified in Specification 3.13.G.4 below, the Turbine Building Foam System shall be operable with its foam concentrate tank full (150 gallons).
- 4. From and after the date that the Turbine Building Foam System is inoperable a portable foam nozzle shall be brought to the Turbine Building Foam System location. A 150 gallon foam concentrate supply shall be available on-site.

#### 4.13 SURVEILLANCE REQUIREMENTS

#### G. Foam Systems

- 1. The foam system specified in 3.13.5 shall be demonstrated operable.
  - a. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
  - b. At least once per 18 months by:
    - 1. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.
    - 2. A visual inspection of the foam system and equipment to verify integrity, and
    - 3. A visual inspection of the Recirculation M.G. Set Foam System foam nozzle area to verify that the spray pattern is not obstructed.
    - 4. Foam concentrate samples shall be taken and analyzed for acceptability.

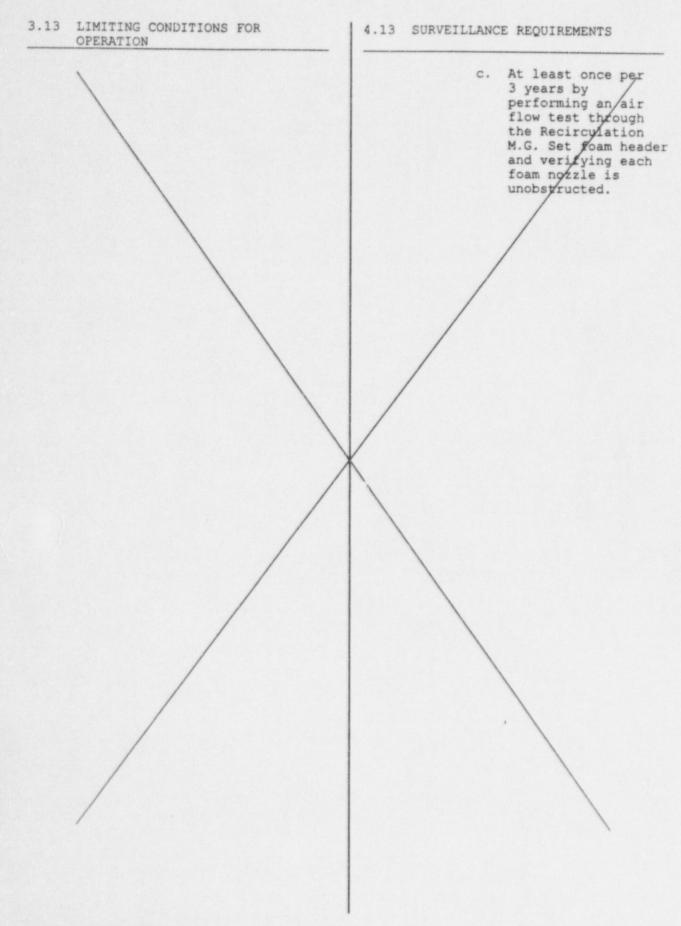


TABLE 3.13.A.1

#### FIRE DETECTION SENSORS

			mum No. of Sensors ired to Be Operable	
	Sensor Location	Heat	Flame	Smoke
1.	Cable Spreading Room & Station Battery Room	-	-	/ 23
2.	Switchgear Room (East)	-	-/	10
3.	Switchgear Room (West)	-	-/	10
4.	Diesel Generator Room (A)	-	/-	2
5.	Diesel Generator Room (B)	- /	/ -	2
6.	Intake Structure (Service Water)	1/	1	1
7.	Recirc Motor Generator Set Area	8	-	8
8.a	Control Room Zone 1 (Control Room Ceiling)	/-	-	14
8.b	Control Room Zone 2 (Control Room Panels)	-	-	18
8.0	Control Room Zone 3 (Control Room Panels)	-	-	25
8.d	Control Room Zone 4 (Control Room Panels)	-	-	10
8.e	Control Room Zone 5 (Exhaust & Supply Ducts)	-	-	2
9.a	Rx Bldg. Corner Rm NW 232	-	-	1
9.b	Rx Bldg. Corner Rm NW 213 (RCIC)	-	-	1
9.0	Rx Bldg. Corner Rm NE 232	-	-	1
9.d	Rx Bldg. Corner Rm NE 213	-	-	1
9.e	Rx Bldg. Corner Rm SE 232	-	-	1
9.f	Rx Bldg. Corner Rm SE 213	-	-	1
9.g	Rx Bldg. Corner Rm SW 232	1-	-	1
10.	HPCI Room	-/	-	8
11.	Torus area	12	-	16
12.	Rx Bldg. Cable Penetration Area	- \	\ -	7
13.	Refuel Flogr	-	+	13
14.	Diesel Oil Day Tank Room (A)	-	1.	1*
15.	Diesel Oil Day Tank Room (B)	-	1*	1*
16.	Turbine Loading Bay (vehicles)	-	3	\ -
				1

\*NOTE: The Diesel Day Tank Rooms require only one detector operable (1 flame or 1 smoke).

#### BASES:

#### 3.13 & 4.13 FIRE PROTECTION SYSTEMS

on May 11, 1976, Vermont Yankee received a letter from the NRC requesting that an in-depth evaluation of the existing fire protection systems be performed using Branch Technical Position (BTP) APCSB 9.5 1 as a guide. Concurrent with this evaluation a fire hazards analysis of the entire plant complex was required. In an effort to clarify the BTP an Appendix A was subsequently issued to specifically address operating plants. Enclosed with this Appendix the NRC requested that proposed Technical Specifications on fire protection also be submitted. The subject section 3.13/4.13 and the following specific bases are those specifications evolving from these efforts.

- A. The smoke, heat and flame detectors provide the early warning fire detection capability necessary to detect problems in vital areas of the plant. Surveillance requirements assure these sensors and their associated instruments to be operable. When the equipment protected by the detectors is not required to be operable, specifications covering the sensors and instruments do not apply.
- B,C, The Vital Fire Suppression Water System, CO<sub>2</sub> systems, sprinkler D.F. systems and foam systems specifications are provided to meet and pre-established levels of system operability in the event of a fire. These systems provide the necessary protection to assure safe reactor shutdown. Periodic surveillance testing provides assurance that vital fire suppression systems are operable.

The east and west switchgear rooms low pressure CO<sub>2</sub> storage tank Technical Specification minimum level of 50% provides for sufficient CO<sub>2</sub> quantity to achieve and maintain design concentration, in accordance with NFPA 12 (1993), in the east or west switchgear rooms. The Technical Specification minimum tank pressure of 270 psig will provide the minimum pressure to meet system design.

E. Vital fire barrier penetration fire seals are provided to assure that the fire resistance rating of barriers is not reduced by a penetration. Surveillance inspections shall be performed to insure that the integrity of these seals is maintained.

The diesel fire pump has a design consumption rate of 18 gallons of fuel per hour; therefore, 150 gallons provides for greater than 8 hours of operation. Additional fuel can be delivered in about one bour and additional fuel is on site. When the equipment protected by the fire protection systems is not required to be operable, the specifications governing the fire protection system do not apply.

#### VYNPS

- f. Investigate reported instances of violations of Technical Specifications, such investigations to include reporting, evaluation, and recommendations to prevent recurrence, to the Manager of Operations.
- g. Perform special reviews and investigations and render reports thereon as requested by the Chairman of the Nuclear Safety Audit and Review Committee.

#### . Authority

a. The Plant Operation Review Committee shall be advisory.

h. Review of the Fire

Protection Program and
Implementing procedures,
and submittal of recommended
changes to the Nuclear
Safety Audit and Review
The

Committee.

The Plant Operation Review Committee shall recommend to the Plant Manager approval or disapproval of proposals under Items 6 (a) through (d) above.

In the event of disagreement between the recommendations of the Plant Operation Review Committee and the actions contemplated by the Plant Manager, the course determined by the Plant Manager to be the more conservative will be followed with immediate notification to the Manager of Operations.

The Plant Operation Review Committee shall make tentative determinations as to whether or not proposals considered by the Committee involve unreviewed safety questions. This determination shall be subject to review by the Nuclear Safety Audit and Review Committee.

#### 8. Records

Minutes shall be kept at the plant of all meetings of the Plant Operation Review Committee and copies shall be sent to the Manager of Operations and the Nuclear Safety Audit and Review Committee.

#### B. Nuclear Safety Audit and Review Committee

- 1. The Committee shall consist of at least six (6) persons:
  - a. Chairman
  - b. Vice Chairman
  - c. Four technically qualified persons who are not members of the plant staff.
  - d. No more than three members shall be selected from the organization reporting to the Manager of Operations.
  - e. The Committee will obtain advice and counsel from scientific or technical personnel employed by the Company or other organizations whenever the Committee considers it necessary to obtain further scientific or technical assistance in carrying out its responsibilities.

#### **ATTACHMENT 2**

Vermont Yankee Nuclear Power Station Proposed Technical Specification Change No. 189 Supplemental Change: Submittal of Revised Pages

Retyped License and Technical Specification Pages

- c. A verification or coding system for emergency messages between Vermont Yankee and the state police headquarters of the respective states and the Commonwealth.
- 14. Vermont Yankee shall furnish advance notification to MDPH, or to another Commonwealth agency designated by MDPH, of the time, method and proposed route through the Commonwealth of any shipments of nuclear fuel and wastes to and from the Vermont Yankee facility which will utilize railways or roadways in the Commonwealth.
- F. Vermont Yankee shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Final Safety Analysis Report for the facility and as approved in the SER dated January 13, 1978, and supplemental SERs, dated 2/20/80, 10/24/80, 1/13/83, 3/25/86, 12/8/89, 6/9/97, 8/12/97, 9/2/98, and \_\_\_\_\_\_, subject to the following provisions:

Vermont Yankee may make changes to the approved Fire Protection Program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

The licensee shall fully implement and maintain in effect all

#### 3.G Security Plan

provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10CFR73.55 (51FR27817 and 27822) and to the authority of 10CFR50.90 and 10CFR50.54(p). The plans, which contain Safeguards Information protected under 10CFR73.21, are entitled: "Vermont Yankee Nuclear Power Station Physical Security Plan," with revisions submitted through March 16, 1988; "Vermont Yankee Nuclear Power Station Training and Qualification Plan," with revisions submitted through November 10, 1982; and "Vermont Yankee Nuclear Power Station Safeguards Contingency Plan," with revisions submitted through December 30, 1985. Changes made in

accordance with 10CFR73.55 shall be implemented in accordance

3.H | This paragraph deleted.

with the schedule set forth therein.

A-107 8.25.88 10.20.88

#### 1.0 DEFINITIONS

The succeeding frequently used terms are explicitly defined so that a uniform interpretation of the specifications may be achieved.

- A. Reportable Occurrence The equivalent of a reportable event which shall be any of the conditions specified in Section 50.73 to 10CFR Part 50.
- B. Alteration of the Reactor Core The act of moving any component affecting reactivity within the reactor vessel in the region above the core support plate, below the upper grid and within the shroud. Normal movement of control rods or neutron detectors, or the replacement of neutron detectors is not defined as a core alteration.
- C. Hot Standby Hot standby means operation with the reactor critical and the main steam line isolation valves closed.
- D. Immediate Immediate means that the required action will be initiated as soon as practicable considering the safe operation of the unit and the importance of the required action.
- E. <u>Instrument Calibration</u> An instrument calibration means the adjustment of an instrument signal output so that it corresponds, within acceptable range and accuracy, to a known value(s) of the parameter which the instrument monitors. Calibration shall encompass the entire instrument including actuation, alarm, or trip. Response time as specified is not part of the routine instrument calibration but will be checked once per operating cycle.
- F. Instrument Check An instrument check is qualitative determination of acceptable operability by observation of instrument behavior during operation. This determination shall include, where possible, comparison of the instrument with other independent instruments measuring the same variable.
- G. Instrument Functional Test An instrument functional test shall be:
  - Analog channels the injection of a signal into the channel as close to the sensor as practicable to verify operability including alarm and/or trip functions.
  - Bistable channels the injection of a signal into the sensor to verify the operability including alarm and/or trip functions.
- H. Log System Functional Test A logic system functional test means a test of all relays and contacts of a logic circuit from sensor to activated device to insure all components are operable per design intent. Where possible, action will go to completion, i.e., pumps will be started and valves opened.

- I. Minimum Critical Power Ratio The minimum critical power ratio is defined as the ratio of that power in a fuel assembly which is calculated to cause some point in that assembly to experience boiling transition as calculated by application of the appropriate NRC-approved critical power correlation to the actual assembly operating power.
- J. Mode The reactor mode is that which is established by the mode-selector-switch.
- K. Operable A system, subsystem, train, component or device shall be operable or have operability when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).
- L. Operating Operating means that a system or component is performing its intended functions in its required manner.
- M. Operating Cycle Interval between the end of one refueling outage and the end of the next subsequent refueling outage.
- N. Primary Containment Integrity Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:
  - All manual containment isolation valves on lines connecting to the reactor coolant system or containment, which are not required to be open during accident conditions, are closed. Such valves may be opened intermittently under administrative controls.
  - 2. At least one door in each airlock is closed and sealed.
  - 3. All automatic containment isolation valves are operable or deactivated in the isolated position.
  - 4. All blind flanges and manways are closed.

#### O. Protective Instrumentation Definitions

- Instrument Channel An instrument channel means an arrangement of a sensor and auxiliary equipment required to generate and transmit to a trip system a single trip signal related to the plant parameter monitored by that instrument channel.
- 2. Trip System A trip system means an arrangement of instrument channel trip signals and auxiliary equipment required to initiate action to accomplish a protective trip function. A trip system may require one or more instrument channel trip signals related to one

- or more plant parameters in order to initiate trip system action. Initiation of protective action may require the tripping of a single trip system or the coincident tripping of two trip systems.
- 3. Protective Action An action initiated by the protection system when a limit is reached. A protective action can be at a channel or system level.
- 4. Protective Function A system protective action which results from the protective action of the channels monitoring a particular plant condition.
- P. Rated Neutron Flux Rated neutron flux is the neutron flux that corresponds to a steady state power level of 1593 thermal megawatts.
- Q. Rated Thermal Power Rated thermal power means a steady state power level of 1593 thermal megawatts.
- R. Reactor Power Operation Reactor power operation is any operation with the mode switch in the "Startup/Hot Standby" or "Run" position with the reactor critical and above 1% rated thermal power.
  - 1. Startup/Hot Standby Mode In this mode the low turbine condenser volume trip is bypassed when condenser vacuum is less than 12 inches Hg and both turbine stop valves and bypass valves are closed; the low pressure and the 10 percent closure main steamline isolation valve closure trips are bypassed; the reactor protection system is energized with IRM neutron monitoring system trips and control rod withdrawal interlocks in service and APRM neutron monitoring system operable.
  - 2. Run Mode In this mode the reactor system pressure is equal to or greater than 800 psig and the reactor protection system is energized with APRM protection and RBM interlocks in service.
- S. Reactor Vessel Pressure Unless otherwise indicated, reactor vessel pressures listed in the Technical Specifications are those measured by the reactor vessel steam space detector.
- T. Refueling Outage Refueling outage is the period of time between the shutdown of the unit prior to a refueling and the startup of the plant subsequent to that refueling. For the purpose of designating frequency of testing and surveillance, a refueling outage shall mean a regularly scheduled refueling outage; however, where such outages occur within 8 months of the completion of the previous refueling outage, the required surveillance testing need not be performed until the next regularly scheduled outage.
- U. <u>Secondary Containment Integrity</u> Secondary containment integrity means that the reactor building is intact and the following conditions are met:
  - 1. At least one door in each access opening is closed.

- 2. The standby gas treatment system is operable.
- 3. All reactor building automatic ventilation system isolation valves are operable or are secured in the isolated position.
- V. Shutdown The reactor is in a shutdown condition when the reactor mode switch is in the shutdown mode position and no core alterations are being performed. When the mode switch is placed in the shutdown position a reactor scram is initiated, power to the control rod drives is removed, and the reactor protection system trip systems are de-energized.
  - 1. Hot Shutdown means conditions as above with reactor coolant temperature greater that 212°F.
  - 2. Cold Shutdown means conditions as above with reactor coolant temperature equal to or less than 212°F.
  - 3. Shutdown means conditions as above such that the effective multiplication factor  $(K_{\rm eff})$  of the core shall be less than 0.99.
- W. <u>Simulated Automatic Actuation</u> Simulated automatic actuation means applying a simulated signal to the sensor to actuate circuit in question.
- X. Transition Boiling Transition boiling means the boiling regime between nucleate and film boiling. Transition boiling is the regime in which both nucleate and film boiling occur intermittently with neither type being completely stable.
- Y. Surveillance Frequency Unless otherwise stated in these specifications, periodic surveillance tests, checks, calibrations, and examinations shall be performed within the specified surveillance intervals. These intervals may be adjusted plus 25%. The operating cycle interval is considered to be 18 months and the tolerance stated above is applicable.
- Z. Surveillance Interval The surveillance interval is the calendar time between surveillance tests, checks, calibrations, and examinations to be performed upon an instrument or component when it is required to be operable. These tests unless otherwise stated in these specifications may be waived when the instrument, component, or system is not required to be operable, but these tests shall be performed on the instrument, component, or system prior to being required to be operable.
- AA. Deleted
- BB. Source Check The qualitative assessment of channel response when the channel sensor is exposed to a radioactive source.
- CC. Dose Equivalent I-131 The dose equivalent I-131 shall be that concentration of I-131 (microcurie/gram) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134 and I-135 actually present. The thyroid dose conversion

- factors used for this calculation shall be those listed in NRC Regulatory Guide 1.109, Revision 1, October 1977.
- DD. Solidification Solidification shall be the conversion of wet wastes into a form that meets shipping and burial ground requirements. Suitable forms include dewatered resins and filter sludges.
- EE. Deleted
- FF. Site Boundary The site boundary is shown in Figure 2.2-5 in the FSAR.
- GG. Deleted
- HH. Deleted
- II. Off-Site Dose Calculation Manual (ODCM) A manual containing the current methodology and parameters used in the calculation of off-site doses due to radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm/trip setpoints, and in the conduction of the environmental radiological monitoring program.
- JJ. Process Control Program (PCP) A process control program shall contain the sampling, analysis, tests, and determinations by which wet radioactive waste from liquid systems is assured to be converted to a form suitable for off-site disposal.
- KK. Gaseous Radwaste Treatment System The Augmented Off-Gas System (AOG) is the gaseous radwaste treatment system which has been designed and installed to reduce radioactive gaseous effluents by collecting primary coolant system off-gases from the primary system and providing for delay or holdup for the purpose of reducing the total radioactivity prior to release to the environment.
- LL. Ventilation Exhaust Treatment System The Radwaste Building and AOG Building ventilation HEPA filters are ventilation exhaust treatment systems which have been designed and installed to reduce radioactive material in particulate form in gaseous effluents by passing ventilation air through HEPA filters for the purpose of removing radioactive particulates from the gaseous exhaust stream prior to release to the environment. Engineered safety feature atmospheric cleanup systems, such as the Standby Gas Treatment (SBGT) System, are not considered to be ventilation exhaust treatment system components.
- MM. Vent/Purging Vent/Purging is the controlled process of discharging air or gas from the primary containment to control temperature, pressure, humidity, concentration or other operating conditions.
- NN. Core Operating Limits Report The Core Operating Limits Report is the unit-specific document that provides core operating limits for the current operating reload cycle. These cycle-specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.7.A.4. Plant operation within these operating limits is addressed in individual specifications.

4.13 SURVEILLANCE REQUIREMENTS

4.13 SURVEILLANCE REQUIREMENTS

4.13 SURVEILLANCE REQUIREMENTS

0.13 LIMITING CON OPERATION			LLANCE REQUIREMENT:	
	This page h	as been deleted.		
	mas page n	do d		

- f. Investigate reported instances of violations of Technical Specifications, such investigations to include reporting, evaluation, and recommendations to prevent recurrence, to the Manager of Operations.
- g. Perform special reviews and investigations and render reports thereon as requested by the Chairman of the Nuclear Safety Audit and Review Committee.
- h. Review of the Fire Protection Program and implementing procedures, and submittal of recommended changes to the Nuclear Safety Audit and Review Committee.

#### 7. Authority

- The Plant Operation Review Committee shall be advisory.
- b. The Plant Operation Review Committee shall recommend to the Plant Manager approval or disapproval of proposals under Items 6 (a) through (d) above.
  - 1. In the event of disagreement between the recommendations of the Plant Operation Review Committee and the actions contemplated by the Plant Manager, the course determined by the Plant Manager to be the more conservative will be followed with immediate notification to the Manager of Operations.
- c. The Plant Operation Review Committee shall make tentative determinations as to whether or not proposals considered by the Committee involve unreviewed safety questions. This determination shall be subject to review by the Nuclear Safety Audit and Review Committee.

#### 8. Records

Minutes shall be kept at the plant of all meetings of the Plant Operation Review Committee and copies shall be sent to the Manager of Operations and the Nuclear Safety Audit and Review Committee.

#### B. Nuclear Safety Audit and Review Committee

- The Committee shall consist of at least six (6) persons:
  - a. Chairman
  - b. Vice Chairman
  - c. Four technically qualified persons who are not members of the plant staff.
  - d. No more than three members shall be selected from the organization reporting to the Manager of Operations.
  - e. The Committee will obtain advice and counsel from scientific or technical personnel employed by the Company or other organizations whenever the Committee considers it necessary to obtain further scientific or technical assistance in carrying out its responsibilities.