



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

CBS CORPORATION ACTING THROUGH ITS  
WESTINGHOUSE ELECTRIC COMPANY DIVISION

DOCKET NO. 50-22

AMENDMENT TO FACILITY LICENSE

Amendment No. 8  
License No. TR-2

1. The U. S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by the Westinghouse Electric Corporation, whose name was changed to the CBS Corporation acting through its Westinghouse Electric Company Division (the licensee), dated July 31, 1997, as supplemented on March 20, and July 10, 1998, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations as set forth in 10 CFR Chapter I;
  - B. The facility will be decommissioned in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance that (i) the activities authorized by this amendment can be conducted without endangering the health and safety of the public and (ii) such activities will be conducted in compliance with the regulations of the Commission.
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended to approve the decommissioning plan described in the licensee's application dated July 31, 1997, as supplemented on March 20 and July 10, 1988, and authorizes inclusion of the decommissioning plan as a supplement to the Safety Analysis Report pursuant to 10 CFR 50.82(b)(5). Also, the license is amended to add Technical Specifications in revised Paragraph 4, and the license is further amended to read as follows:

A. Paragraph 2.a. of the license shall read:

Pursuant to Section 104(c) of the Atomic Energy Act of 1954, as amended, (hereinafter referred to as "the Act") and Title 10 CFR Chapter I, Part 50, "Licensing of Production and Utilization Facilities," to possess, but not to operate, the facility as a utilization facility.

B. Paragraph 3 is revised to refer to the revised section numbers in the revised 10 CFR Part 20:

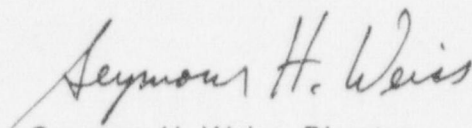
Pursuant to the Act and Section 20.2301 of Title 10, CFR, Chapter I, Part 20, "Standards for Protection Against Radiation," CBS is exempt from the requirements of Section 20.1601(a)(2) for a visible or audible control device in high radiation areas of the Westinghouse Test Reactor.

C. Paragraph 4 is revised to read as follows:

This license shall be deemed to contain and be subject to all applicable provisions of the Act and rules, regulations and orders of the Commission now or hereafter in effect. The Technical Specifications contained in Appendix A are hereby incorporated in the license. The CBS Corporation shall possess and decommission the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Seymour H. Weiss, Director  
Non-Power Reactors and Decommissioning  
Project Directorate  
Division of Reactor Program Management  
Office of Nuclear Reactor Regulation

Date of Issuance: September 30, 1998

APPENDIX A  
TO WTR DECOMMISSIONING PLAN

TECHNICAL SPECIFICATIONS  
FOR  
WESTINGHOUSE TEST REACTOR (WTR)

CBS CORPORATION  
WALTZ MILL SITE

USNRC LICENSE NO. TR-2  
DOCKET NO. 50-22



**I. Introduction**

These Technical Specifications are applicable to activities at the Westinghouse Test Reactor (WTR), Waltz Mill Site, under provisions of NRC License No. TR-2. The WTR was shut down in 1962, and has been maintained in a safe storage condition since that time.

These Technical Specifications apply during the safe storage period, and also during decommissioning activities. Decommissioning includes the dismantlement and removal of the reactor vessel internal contents, the reactor vessel, and the biological shield. All residual radioactivity will then be transferred to the materials license for the remainder of the Waltz Mill Site, NRC License No. SNM-770. After completion of decommissioning and transfer of residual radioactivity to the materials license, the TR-2 license will then be terminated by the Nuclear Regulatory Commission.



**2.0 Definitions**

- 2.1 Channel. A channel is the combination of sensor, line amplifier, and output devices which are connected for the purpose of measuring the value of a parameter.
- 2.2 Channel Test. A channel test is the introduction of a signal into the channel for verification that it is operable.
- 2.3 Channel Calibration. A channel calibration is an adjustment of the channel such that its output corresponds with acceptable accuracy to known values of the parameter which the channel measures. Calibration shall encompass the entire channel, including equipment actuation, alarm or trip, and shall be deemed to include a channel test.
- 2.4 Channel Check. A channel check is a qualitative verification of acceptable performance by observation of channel behavior. This verification, where possible, shall include comparison of the channel with other independent channels or systems measuring the same variable.
- 2.5 Confinement. A closure on the overall facility or volume within the facility which prevents the uncontrolled spread of contamination, and controls the movement of air into and out through a controlled path.
- 2.6 Operable. Operable means a component or system is capable of performing its intended function.
- 2.7 Operating. Operating means a component or system is performing its intended function.
- 2.8 Shall, should and may. "Shall" is used to denote a requirement; "should" to denote a recommendation; and "may" to denote permission, neither a requirement nor a recommendation.
- 2.9 Facility Specific Definitions
  - a. Restricted Activity. An activity inside of the reactor building involving activated or contaminated reactor facility structures, components or systems that could cause airborne material in concentrations in excess of the Derived Air Concentrations (DAC) in 10 CFR 20, Appendix B, Table 1, Column 3.
  - b. Containment Building. The same structure described in the Final Safety Report as the vapor containment, or reactor containment building.
  - c. Reactor Facility. The containment building, ventilation system, the WTR canal, and contaminated piping connecting these components.

- d. Containment Device. An engineered barrier that does not necessarily constitute total enclosure, used to prevent the spread of radioactive contamination and airborne radioactivity.
- e. Unrestricted Area. An area to which access is neither limited nor controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials.

### **3.0 Limiting Conditions for Operation**

#### **3.1 Confinement**

##### **3.1.1 Applicability**

This specification applies to the containment building.

##### **3.1.2 Objective**

The objective of this specification is to define the activities which require confinement, the conditions necessary for maintaining confinement, and the actions to be taken if confinement is not maintained.

##### **3.1.3 Specifications**

###### **3.1.3.1 Activities that Require Confinement**

Restricted Activities require confinement.

###### **3.1.3.2 Limiting Conditions for Maintaining Confinement**

During restricted activities:

- (1) Either the inner or the outer door(s) in each air lock and in the truck lock shall be kept closed except during personnel ingress or egress, or while equipment is being passed through the doorways.
- (2) The ventilation system shall be operating.
- (3) While containment openings are open for removal of materials or equipment from the containment building, the ventilation exhaust fans shall be operating (supply fans, if any, shall be turned off), and all other Restricted Activities shall be suspended.
- (4) The outer doors in the air lock and truck lock outer doors shall be locked or blocked closed to prevent unauthorized entry except when authorized personnel are inside the containment building or outside with the door in view.
- (5) When the ventilation system is not operating, the containment building shall be maintained in a condition such that there are no airflow pathways open directly to areas external to the containment building except the air lock doorways when the doors are open.

###### **3.1.3.3 Actions To Be Taken If Confinement Is Not Maintained**

If Confinement is not maintained in accordance with Specification 3.1.3.2:

- (1) Within 1 hour, all Restricted Activities shall be suspended.
- (2) Other activities that are NOT Restricted Activities may proceed without



Confinement, provided that ventilation exhaust fan(s) are operating.

### 3.1.4 Bases

Historical measurements of airborne radioactivity inside the containment building indicate that the containment building in its present condition does not require a confinement system. Because of the activation and surface contamination levels, dismantlement activities associated with removal of reactor vessel internal contents, the reactor vessel, biological shield, and other Restricted Activities could cause airborne concentrations in excess of DAC. Maintaining confinement during Restricted Activities prevents the uncontrolled spread of contamination during these activities.

The restrictions and limitations in Specification 3.1.3.2 are necessary to provide assurance that an effective confinement system will be established and maintained.

The one hour action time provided in Specification 3.1.3.3 allows an orderly suspension of activities in the event that the conditions specified for maintaining confinement are not met. If confinement is not maintained, other activities are permitted as long as ventilation exhaust fans are operating to minimize the potential for outward air flow; this provision permits activities that would require an opening in the containment building to remove items that have no potential for creating airborne contamination in excess of 10 CFR 20 limits. For example, the reactor vessel could be removed by suspending Restricted Activities that could create airborne contamination, cutting a suitable opening in the containment building, and maintaining the ventilation system operating, while the reactor vessel is removed from the containment building.

## 3.2 Ventilation Systems

### 3.2.1 Applicability

This specification applies to ventilation systems used to prevent uncontrolled spread of airborne contamination within the reactor building .

### 3.2.2 Objective

This specification describes the minimum requirements for operation and installation of ventilation systems.

### 3.2.3 Specification

#### 3.2.3.1 Activities that Require Ventilation

Activities involving physical handling of the reactor vessel, reactor vessel internal contents, biological shield, or any Restricted Activities require that a ventilation system be operating.

### 3.2.3.2 Limiting Conditions for Ventilation Systems

- (1) During activities that require ventilation, ventilation system(s) shall be operating to ensure that air flow is from zones of lesser potential for airborne contamination to zones of greater potential for airborne contamination.
- (2) Ventilation systems shall be designed to confine radioactive materials and to prevent uncontrolled release of radioactive material. Materials of construction shall be fire-resistant.
- (3) Ventilation systems may be of a localized type using temporary containment devices.
- (4) Ventilation systems shall discharge through a particulate filter system capable of ensuring that air effluents comply with the requirements of 10 CFR 20, Appendix B, Table 2, Column 1 and 10 CFR 20.1101, for unrestricted areas.

### 3.2.3.3 Actions To Be Taken If Ventilation System Requirements Are Not Maintained

If ventilation system requirements are not maintained, within 1 hour, suspend all activities within the area served by the inoperable ventilation system, that involve physical handling of the reactor vessel, reactor vessel internal contents, biological shield, and all other restricted activities.

If the exhaust release rates are such that effluent limits may be exceeded, immediately suspend activities causing the release. Implement corrective action to ensure further release is within the limits.

### 3.2.4 Bases

The extremely small source term at the WTR is adequately confined by the containment building. Whenever restricted activities are in progress, an operating ventilation system will minimize the spread of contamination to other areas, and the discharge filter and effluent monitor (see Specification 3.3) provide assurance that effluent concentrations are within applicable limits. The decommissioning accident analyses do not take credit for filtered ventilation of any accidentally released radioactive materials, so no specific HEPA filter efficiencies are required. The only requirement for exhaust filter installations is that air effluents must comply with the requirements of 10 CFR 20.

The restrictions and limitations in Specification 3.2.3.2 are necessary to provide assurance that an effective ventilation system will be established and maintained.

The one hour action time provided in Specification 3.2.3.3 allows an orderly suspension of activities in the event that the conditions specified for maintaining ventilation system requirements are not met. Immediate actions are appropriate to correct effluent releases that could exceed 10 CFR 20 limits.

### **3.3 Radiation and Effluent Monitoring Systems**

#### **3.3.1 Applicability**

This specification applies to those devices either permanently installed or portable, used to detect radiation and/or contamination levels, and to monitor effluents released, if any, from the containment building.

#### **3.3.2 Objective**

To describe the minimum radiological instrument capabilities that must be available for use at the reactor facility to protect workers and to ensure that effluents released from the containment building meet regulatory requirements.

#### **3.3.3 Specifications**

##### **3.3.3.1 Activities that Require Monitoring Systems**

Radiation and effluent monitoring systems are required during physical handling of reactor vessel internal contents, the reactor vessel, biological shield, and during any other Restricted Activities.

##### **3.3.3.2 Limiting Conditions for Monitoring Systems**

The radiological instrumentation capability that must be available for use at the reactor facility is as follows:

- (1) Airborne Activity Monitors - Both portable and/or stationary effluent, general area, continuous air monitoring devices, and personal air sampling devices shall be used, as necessary, in the containment building, and will be appropriately located to support activities in progress.
- (2) Portable Instrumentation - An adequate number of instruments of sufficient accuracy and sensitivity shall be available to ensure compliance with the radiation monitoring and measuring requirements of 10 CFR Part 20 including beta-gamma survey meters (up to 1000 R/hr) for radiation dose rates and surface contamination measurement (up to 500,000 cpm) and alpha survey meters for surface contamination (up to 50,000 cpm).
- (3) Lab Counting Instrumentation/Methods - Gamma spectroscopy, and other standard lab counting methods, including wet chemistry methods.

##### **3.3.3.3 Actions To Be Taken If Required Radiation Monitors Are Not Operable**

If stationary monitors are inoperable, within 1 hour, install suitable portable instruments, or perform surveys or analyses under direction of the Radiation Survey Officer, as substitutes for any of the monitors in this section.



With no operable radiation monitors, or applicable surveys or analyses, suspend all activities involving physical handling of reactor vessel internal contents, the reactor vessel, biological shield, or any other restricted activity.

#### 3.3.4 Bases

The monitoring systems described in 3.3.3.1 will provide assurance that the radiation levels and the concentration of airborne radioactive material in the working areas are measured during the conduct of restricted activities and all other physical decommissioning activities.

### 3.4 Effluents and Environmental Monitoring

#### 3.4.1 Applicability

This specification applies at all times.

#### 3.4.2 Objective

To ensure that air and liquid effluents released from the TR-2 reactor facility conform to the requirements of 10 CFR 20, and that environmental monitoring is performed to confirm the effectiveness of effluent controls.

#### 3.4.3 Specifications

##### 3.4.3.1 Limiting Conditions for Air Effluents

Radioactive material discharged from the containment building to the atmosphere shall conform to the requirements of 10 CFR 20, Appendix B, Table 2, Column 1 and 10 CFR 20.1101.

##### 3.4.3.2 Limiting Conditions for Liquid Effluents

Liquid effluents exceeding the effluent concentration limits of Column 2 of Table 2, Appendix B, 10 CFR 20, shall be processed through the site liquid waste processing system and discharged in accordance with the provisions of License Number SNM-770.

##### 3.4.3.3 Actions

If air or liquid effluents are determined to exceed the limitations of Specifications 3.4.3.1 or 3.4.3.2 above, activities that produce those effluents shall be immediately suspended.

#### 3.4.4 Bases

Effluents produced during dismantlement and other decommissioning activities must continue to meet the radiation protection requirements of 10 CFR 20. The Waltz Mill environmental monitoring program specified in Specification 4.4, and conducted in accordance with license SNM-770 will continue to verify the environmental impacts, if any, of radiological releases from the facility. This program examines air, water, soil, sediment, and other representative environmental media in the surrounding area.

#### **4.0 Surveillance Requirements**

##### **4.1 Confinement**

###### **4.1.1 Applicability**

This specification applies to the surveillance requirements for the reactor building confinement system.

###### **4.1.2 Objective**

To assure that the reactor building is maintained in a condition that provides an effective boundary for the confinement system.

###### **4.1.3 Specifications**

- (1) At least annually and prior to initiation of any restricted activities, facility records shall be reviewed and the containment building shall be visually inspected to determine that there are no pathways open directly to the environment, except the air lock and truck lock doorways when opened.
- (2) At least once per month, a visual examination shall be performed to determine that the outer air lock and truck lock doors are locked or blocked closed whenever no one is inside of the containment building.

###### **4.1.4 Bases**

Compliance with these specifications provides assurance that the containment building is maintained as an effective confinement boundary.

##### **4.2 Ventilation Systems**

###### **4.2.1 Applicability**

Applies to ventilation systems established to support restricted activities.

###### **4.2.2 Objective**

To specify surveillance requirements that will provide assurance that a ventilation system is operable when required.

###### **4.2.3 Specifications**

- (1) At least once per week, whenever a ventilation system is required to be operating, verify that the direction of air flow is from zones of lesser potential for airborne contamination to zones of greater potential for airborne contamination.
- (2) When a ventilation system is required to be operable, the exhaust air downstream of the filters shall be continuously monitored or sampled to show that the specified concentrations in 10 CFR 20, Appendix B are not exceeded.

- (3) Prior to placing a ventilation system in service, verify that all materials of construction for the ventilation systems are fire-resistant. All filters shall be verified to be of a fire-resistant type and, where applicable, listed by Underwriters' Laboratories or the Factory Mutual Research Corporation.
- (4) Prior to placing a ventilation system filter housing in service, verify that it includes an instrumentation device or multiple devices to indicate filter resistance and airflow rate.
- (5) Initially and at least once every 18 months, after structural maintenance on HEPA filter housing, or after complete or partial replacement of a HEPA filter bank on the WTR containment ventilation system, verify in-place leakage. This in-place leakage test shall verify a leakage acceptance criteria of 0.05 percent using dioctyl-phthalate (DOP) in accordance with the provisions of ANSI N510, or an acceptable alternative, at nominal rate flow.

### 4.3 Radiation and Effluent Monitoring Systems

#### 4.3.1 Applicability

This specification applies to the equipment and systems installed to detect radiation and/or contamination, e.g., laboratory counting instruments, and portable radiation measuring instrumentation used for the reactor facility.

#### 4.3.2 Objective

To describe check and calibration frequencies for laboratory counting instruments, and portable radiation measuring instrumentation.

#### 4.3.3 Specification

- (1) Upon initial acquisition, after major maintenance, and at least annually, stationary and portable monitoring instruments shall be calibrated using NIST traceable services.
- (2) At least quarterly, background and efficiency shall be measured on all laboratory instruments used for counting health physics samples, using standard sources.
- (3) Prior to placing an effluent monitoring instrument into service, after major maintenance, and at least annually thereafter while in service, a channel calibration of the ventilation effluent monitoring sampler and/or monitor shall be performed. At least monthly while in service, a channel check of the sampler or monitor shall be performed. These tests need not be performed if operation of the ventilation system is not required during the year.

#### 4.3.4 Bases

These specifications provide assurance that monitoring and analytical instrumentation will be functional when needed.



#### **4.4 Effluents and Environmental Monitoring**

##### **4.4.1 Applicability**

This specification applies at all times.

##### **4.4.2 Objective**

To specify surveillance requirements to verify compliance with 10 CFR 20 requirements and to specify environmental monitoring requirements.

##### **4.4.3 Specification**

###### **4.4.3.1 Air Effluent Surveillance Requirements**

Air effluent particulate monitors shall be examined at least once per week during physical handling of reactor vessel internal contents, the reactor vessel, biological shield, and during restricted activities to verify compliance with 10 CFR 20 limits.

###### **4.4.3.2 Liquid Effluent Surveillance Requirements**

Liquid effluents shall be sampled and analyzed prior to release, to determine whether they can be discharged directly or whether they require processing prior to discharge in accordance with the provisions of License No. SNM-770.

###### **4.4.3.4 Environmental Monitoring Requirements**

The environmental monitoring requirements of License No. SNM-770 shall continue to be implemented during decommissioning activities at the WTR facility.

##### **4.4.4 Bases**

The current programs for effluent and environmental monitoring for License No. SNM-770 include stationary and general air monitoring, weekly water monitoring at the weir discharge to Calley's Run, direct radiation monitoring, quarterly surface water runoff and stream measurements, quarterly drinking water sampling, annual sediment and soil sampling, vegetation sampling, and groundwater monitoring. These programs are comprehensive and appropriate for WTR decommissioning activities. A weekly analysis of air effluents is added to monitor for compliance with 10 CFR 20 requirements during restricted activities and during other decommissioning activities with the potential for creating airborne contamination that could be released to the environment.

#### **5.0 Design Features**

See "Site Characterization" reports already referenced. The facility is located on the Westinghouse Waltz Mill Site which is owned and controlled by the CBS Corporation. The approximate distance from the reactor building to the posted site boundary is about 200 yards. The restricted area as defined in 10 CFR 20 of the Commission's regulations shall be the containment building. The controlled area as defined in 10 CFR 20 shall be the Central Operations Area of the Waltz Mill Site.

## **6.0 Administrative Controls**

### **6.1 Organization**

6.1.1 The organization for the management and decommissioning of the WTR facility shall include the following structure. Other organizational levels/staffing may be added to meet specific facility needs.

- (1) Level 1 - Individual responsible for the reactor facility licenses (i.e., General Manager, NSD).
- (2) Level 2 - Individual responsible for the reactor facility activities (i.e., Waltz Mill Site Manager).
- (3) Level 3 - Individual responsible for the day-to-day supervision (i.e., Radiation Safety Officer, other facility supervisors).

### **6.1.2 Responsibility**

Responsibility for the reactor facility shall be with the chain of command as specified in 6.1.1 above. Individuals at the various management levels, in addition to having responsibility for the policies and activities conducted by the WTR facility, shall be responsible for safeguarding the public and facility personnel from undue radiation exposures and for adhering to all requirements of the facility license and technical specifications.

In all instances, responsibilities of one level may be assumed by designated alternates or by higher levels, conditional upon appropriate qualifications.

## **6.2 Radiation Safety Committee**

6.2.1 The Radiation Safety Committee shall provide management oversight and review of WTR decommissioning activities. The Radiation Safety Committee services to advise the Level 2 manager on matters that affect radiation safety, on areas where additional oversight or auditing is needed, and on items that involve an unreviewed safety question.

### **6.2.2 Charter and Rules**

Radiation Safety Committee activities shall be performed under a written charter or directive containing the following information, as a minimum.

- A. Membership designation, including quorum requirements and provisions for alternates.
- B. Meeting frequencies.
- C. Subjects reviewed.
- D. Responsibilities.

- E. Authorities.
- F. Records.
- G. Other matters as may be appropriate.

#### **6.2.3 Review Requirements**

The Radiation Safety Committee shall be responsible for review of the following:

- A. Proposed activities that could affect personnel or facility safety or result in an uncontrolled release of radioactivity in excess of 10 CFR 20 limits, to be conducted without NRC approval, and reviewed and approved pursuant to 10 CFR 50.59 to verify the proposed activity does not constitute a change in the technical specifications or an unreviewed safety question.
- B. Proposed changes to the facility or to procedures required by Specification 6.3, that could affect radiation safety and that are to be completed without prior NRC approval reviewed and approved pursuant to 10 CFR 50.59 to verify the activity does not constitute a change in the Technical Specifications or any unreviewed safety question.
- C. All new procedures and revisions thereto that have significant effect on radiation safety.
- D. Proposed changes to the Technical Specifications or the facility license.
- E. Violations of the federal regulations, Technical Specifications, or facility license requirements.
- F. Unusual or abnormal occurrences which are reportable to the NRC under provisions of the federal regulations.

#### **6.2.4 Audit Requirements**

Independent audits of decommissioning activities shall be performed under the cognizance of the Radiation Safety Committee. Audits shall include selective, but comprehensive, examination of activities, records, and documents with cognizant personnel, and observation of operations as appropriate. Audit personnel shall be technically qualified and should not have been involved in performance of the activity being audited. Audits shall include the following:

- (1) Facility activities for conformance to the Technical Specifications and license, at least once per calendar year (interval between examinations not to exceed 15 months).
- (2) The qualifications of the staff, at least once every other calendar year (interval between examinations not to exceed 30 months).



- (3) The results of action taken to correct those deficiencies that may occur in the reactor facility equipment, systems, structures, or methods of operations that affect facility safety, at least once per calendar year (interval between examination not to exceed 15 months).

Deficiencies uncovered that affect facility radiation safety shall immediately be reported to Level 2 management. A written report of the findings of each audit shall be submitted to Level 2 management and the manager of the radiation safety function within three months after the audit has been completed.

### 6.3 Procedures

Written procedures, including ALARA, shall be prepared and approved prior to initiating any activities listed in this section. Procedures for the following activities may be included in a single manual or set of procedures or divided among various manuals or procedures:

- (1) Routine maintenance of major components or systems that could have an effect on facility radiation safety.
- (2) Surveillance tests and calibrations required by the Technical Specifications or those that may have an effect on facility radiation safety.
- (3) Personnel radiation protection, consistent with applicable regulations.
- (4) Administrative controls for maintenance and for the conduct of activities that could affect facility radiation safety.

Decommissioning activities shall be conducted utilizing the published and approved procedures except as noted below:

Substantive changes to the above procedures shall be made effective only after approval by appropriate management; changes which could affect radiation safety shall be reviewed by the Radiation Safety Committee. Minor modifications to the original procedures which do not change their original intent may be made as a temporary change by Level 3 or higher and shall be documented; any temporary change that affects radiation safety must be reviewed by the Radiation Safety Committee within the following 45 days. All changes (except one-time deviations) shall be incorporated into the written procedures.

### 6.4 Required Actions

The following actions shall be taken in the event of an occurrence of the type identified in 6.6.2 (1) a. or 6.6.2 (1) b:

- (1) Reactor facility conditions shall be returned to normal or the activities in progress stopped. If it is necessary to stop the activities in progress to correct the occurrence, operations shall not resume unless authorized by Level 2 or designated alternates.

- (2) Occurrence shall be reported to Level 2 or designated alternates and to the NRC as required.
- (3) Occurrence shall be reviewed by the Radiation Safety Committee.

#### **6.5 Reports**

All reports shall be addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555; Attention: Document Control Desk, with a copy to the Regional Administrator, Region I.

##### **6.6.1 Annual Report**

Annually submit to the NRC a report containing the following:

- (1) A narrative summary of facility activities.
- (2) Tabulation of the major preventative and corrective maintenance operations having safety significance.
- (3) A brief description of major changes in the reactor facility and procedures and activities significantly different from those performed previously and not described in the safety analysis report, and a summary of the safety evaluation that shows no unreviewed safety questions were involved.
- (4) A summary of the nature and amount of radioactive effluents released or discharged to the environs beyond the effective control of the licensee as determined at or before the point of such releases or discharge. The summary shall include to the extent practical, an estimate of the major individual radionuclides present in the effluent. If the estimated average release after dilution or diffusion is less than 25% of the concentration allowed or recommended, a statement to this effect is sufficient.
- (5) A summarized result of the environmental survey performed outside the facility.

##### **6.6.2 Special Reports**

Special reports used to report unplanned events as well as planned major facility or administrative changes shall be submitted in accordance with the following schedule.

- (1) There shall be a report no later than the following working day by telephone and confirmed in writing by telegraph or similar conveyance to the NRC to be followed by a written report that describes the circumstances of the event within 14 days of any of the following:
  - a. Release of radioactivity from the site above allowed limits (see 6.5).
  - b. Any of the following (see 6.5):

- (i) Activities in violation of limiting conditions for conduct of activities established in the Technical Specification unless prompt remedial action is taken.
  - (ii) An observed inadequacy in the implementation of administrative or procedural controls such that the inadequacy causes or could have caused the existence or development of an unsafe condition with regard to facility operations.
- (2) A written report within 30 days to the NRC of:
- a. Permanent changes in the facility organization involving Level 1 or 2 personnel.
  - b. Significant changes in the accident analysis as described in the decommissioning plan safety analysis.

#### **6.7 Records**

Records may be in the form of logs, data sheets, or other suitable forms. The required information may be contained in single or multiple records or a combination thereof.

6.7.1 Records to be retained for a period of at least 5 years or for the life of the component involved if less than 5 years:

- (1) Normal facility operation (but not including supporting documents such as check lists, log sheets, etc., which shall be maintained for a period of at least 1 year).
- (2) Principal maintenance activities.
- (3) Reportable occurrences.
- (4) Surveillance activities required by the Technical Specifications.
- (5) Reactor facility radiation and contamination surveys where required by applicable regulations.
- (6) Approved changes in operating procedures.
- (7) Records of meeting and independent examination reports of the review and independent examination group.

6.7.2 Records to be retained for the lifetime of the facility:

NOTE: Applicable annual reports, if they contain all of the required information, may be used as records in this section.

- (1) Air and liquid radioactive effluents released to the environs.
- (2) Off-site environmental monitoring surveys required by the Technical Specifications.
- (3) Radiation exposure for all personnel monitored.



- (4) Drawings of the reactor facility.
- (5) Records of disposal of licensed material.

**6.8 High Radiation Area**

- 6.8.1 Pursuant to 10 CFR 20, in lieu of the "control device" or "alarm signal", each high radiation area, as defined in 10 CFR Part 20, shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP). Individuals qualified in radiation protection procedures (e.g., Health Physics personnel) or personnel continuously escorted by such individuals may be exempt from the RWP issuance requirement during the performance of their assigned duties in high radiation areas with exposure rates equal to or less than 1000 mR/h, provided they are otherwise following plant radiation protection procedures for entry into such high radiation areas. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:
- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area, or
  - b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them, or
  - c. A health physics qualified individual (i.e., qualified in radiation protection procedures) with a radiation dose rate monitoring device who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physics staff in the RWP.
- 6.8.2 In addition to the requirements of 6.8.1, areas accessible to personnel with radiation levels greater than 1000 mR/h at 45 cm (18 in) from the radiation source or from any surface which the radiation penetrates shall be provided with locked enclosures to prevent unauthorized entry, and the keys shall be maintained under the administrative control of health physics supervision. Enclosures shall remain locked except during periods of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work area and the maximum allowable stay time for individuals in the area. In lieu of the stay time specification of the RWP, direct or remote (such as use of closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities within the area.

For individual areas accessible to personnel with radiation levels of greater than 1000 mR/h that are located within large areas, where no enclosure exists for

purposes of locking, and no enclosure can be reasonably constructed around the individual areas, then that area shall be barricaded, conspicuously posted, and a flashing light shall be activated as a warning device whenever the dose rate in the area exceeds or will shortly exceed 1000 mR/hr.