



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20585-0001

April 9, 1997

Mr. James Davis  
Nuclear Energy Institute  
1776 Eye Street, N. W.  
Suite 300  
Washington, DC 20006-2496

Dear Mr. Davis:

As you know, the NRC cancelled its plans to issue a Generic Letter for a line-item improvement to the technical specification administrative controls section, to devote more resources to conversion reviews and additional improvements to the improved standard technical specifications (STS). However, the proposed Generic Letter would have included several changes to the administrative controls to accommodate changes to 10 CFR 20 and 10 CFR 50.36a. In addition, since the issuance of Administrative Letter 95-06 on the relocation of administrative controls related to quality assurance, the staff has identified additional changes to the administrative controls to better accommodate the staffing requirements in 10 CFR Part 50 and Part 55, and to include a new staff position regarding controls for the working hours of personnel who perform safety-related functions.

Enclosure 1 is an NRC proposed change, TSB-011, to the administrative controls section of the STS to reflect the changes described above. In addition, the Technical Specifications Task Force (TSTF) has proposed similar changes to the STS in TSTF-86 and TSTF-121. We request that the TSTF modify their proposals in these travelers, or withdraw those changes and submit a new traveler, to reflect consistent changes to the administrative controls for all versions of the STS. Should you have any questions regarding this matter, please contact Bob Tjader at 301-415-1187.

Sincerely,

Christopher I. Grimes, Chief  
Technical Specifications Branch  
Associate Director for Projects  
Office of Nuclear Reactor Regulation

Enclosure: as stated

cc: C. Szabo, BWOG  
L. Bush, WOG  
B. Mann, CEOG  
A. Maron, BWROG  
B. Ford, BWROG  
D. Hoffman, EXCEL

4-30-97

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TSB FORM 2		U.S. NUCLEAR REGULATORY COMMISSION		PACKAGE NO. TSB- 011	DATE 04/02/97
<b>NRC Proposed Change to the STS</b>					
Originator: R. Tjader		Mgr Approved:		Date: 11/07/96	
Purpose of Change: Update STS to Reflect 10 CFR 20 and 10 CFR 50.36a Changes					
NUREGs Changed		1430: X		1431: X	
1432: X		1433: X		1434: X	
Technical Specifications Changed:					
1) Change Admin Controls Sections 5.2 and 5.3 on unit staffing requirements 2) Change Admin Controls Section 5.5.4, Radioactive Effluent Controls Program 3) Replace Admin Controls Section 5.7, High Radiation Area					
Description of Change:					
Revise STS Admin Controls Sections 5.2 on Unit Staff and 5.3 on Unit Staff Qualifications to remove requirements redundant with regulations. Change/replace STS Admin Controls Sections 5.5.4 and 5.7, respectively, to reflect 10 CFR 20 and 10 CFR 50.36a changes, to maintain consistency between the STS and regulation.					
Justification of Change:					
Revision of TS 5.2.2.e on unit staff working hours reflects recent CRGR-approved changes to the STS. Revision of TS 5.3 on staffing requirements removes requirements redundant to regulations while retaining elements required in TS by regulations. Revisions of 10 CFR Part 20 and 10 CFR 50.36a have superseded related information in the TS and other regulations, thereby prompting NRC to propose this generic change traveller to update the STS. The model STS provided in this package are specifically intended to eliminate possible confusion or improper implementation of the revised 10 CFR Part 20 requirements. (See attached justification.)					
Entered Database		Date: 11/7/96		Filename: g:\forms\changes.mdb	
<b>NRC REVIEW OF PROPOSED STS CHANGE</b>					
TSB Reviewer: R. Tjader		Tech Reviewer: S. Klementowicz (if review required)			
Recommendation		Date: 11/7/96		Recommendation: Date: 11/8/96	
[X] APPROVE [ ] MODIFY [ ] REJECT		[X] APPROVE [ ] MODIFY [ ] REJECT			
Comments:		Comments:			
See above Justification as attachments to traveller. 3/3/97 pkg was incorporated as an enclosure to a letter to NEI and provided to C. Grimes for signature. This change was to have been provided under a Generic Letter, which was cancelled. 4/2/97 TS 5.2 and 5.3 added to package; package forwarded to C. Grimes for disposition.					
<b>PROPOSED STS CHANGE DISPOSITION</b>					
TSB Action		Date: 4/9/97		TSB Action (if applicable) Date:	
[X] APPROVED [ ] MODIFIED [ ] REJECTED		[ ] APPROVED [ ] REVISED [ ] APPEALED			
Comments:		Comments:			
<b>STS FILE AND RECORD DATA CHANGES</b>					
ACTION	BY	DATE	ACTION	BY	DATE
WP Files Updated			Changes Certified		
Changes Proofed			Access Database Updated		
Returned for Corrections			Comment Resolution Database Updated		
Control Books Updated			Close-out Letter Sent to TSTF		
BBS Files Updated			Package Filed		

#### Justification of Changes:

Revision of TS 5.2 and TS 5.3 on staff work hours and staffing requirements removes requirements redundant to regulations while retaining elements required in TS by regulations. Revisions of 10 CFR Part 20 and 10 CFR 50.36a have superseded related information in the TS and other regulations, thereby prompting NRC to propose this generic change traveler to update the STS. The model STS provided in this package are specifically intended to eliminate possible confusion or improper implementation of the revised 10 CFR Part 20 requirements.

#### Staffing Requirements and Working Hours TS Changes (TS 5.2 & TS 5.3)

Revision of TS 5.2.2.e on unit staff working hours reflects recent CRGR-approved changes to the STS. This change, to existing STS paragraph 5.2.2.e, from specific working hour limits to administrative procedures to control working hours will provide reasonable assurance that impaired performance caused by excessive working hours will not jeopardize safe plant operation. Specific working hour limits are not otherwise required to be in the technical specifications under 10 CFR 50.36(c)(5). Specific controls for working hours of reactor plant staff can be described in a licensee procedure that requires a deliberate decision making process to minimize the potential for impaired personnel performance, and that a licensee's established procedure control processes will provide sufficient control for changes to that procedure. These programs have a level of detail necessary to satisfy the policy statement (SECY-93-067) guidance and are retained in the Administrative Controls section of the TS. Therefore, the procedures and details can be relocated outside the TS.

Existing STS paragraph 5.2.2.b is deleted because it is redundant to 10 CFR 50.54(m)(2)(iii).

Existing STS paragraphs 5.2.2.c is revised and a new STS paragraph 5.3.2 is added to ensure that there is no misunderstanding when complying with 10 CFR 55.4 requirements.

#### Changes to TS resulting from 10 CFR 20 Changes (TS 5.5.4 & TS 5.7)

Revisions of 10 CFR Part 20 and 10 CFR 50.36a have superseded related information in the TS and other regulations, thereby prompting NRC to propose this generic change traveler to update the STS. While 10 CFR Part 20 allows licensees to implement the rule without having to make any changes to their approved TS, the NRC has crafted the enclosed model STS sections to provide acceptable language that correlates with the wording in the revised 10 CFR Part 20 and 10 CFR 50.36a. Additionally, in accordance with 10 CFR 20.1601(c), the proposed model STS for high radiation areas contain updated acceptable alternate controls to those given in 10 CFR 20.1601 and Regulatory Guide 8.38. Licensees may propose other alternate high radiation area controls based on their plant specific needs.

In the case of gaseous and liquid effluent release rates, the model STS were crafted to allow licensees to maintain their same overall level of effluent control while retaining the operational flexibility that exists with current STS under the previous 10 CFR Part 20. The model STS continue to require that radiation doses to members of the public from gaseous and liquid effluent releases from nuclear power plants be within the values given in Appendix I to 10 CFR Part 50 and the limits in 10 CFR Part 20.

The model STS provided in this letter are specifically intended to eliminate possible confusion or improper implementation of the revised 10 CFR Part 20 requirements.

## 5.2 Organization

### 5.2.2 Unit Staff

The unit staff organization shall include the following:

- a. A non-Licensed Operator shall be assigned to each reactor containing fuel and an additional non-Licensed Operator shall be assigned for each unit when a reactor is operating in MODES 1, 2, 3, or 4.

[Two unit sites with both units shutdown or defueled, a total of three non-Licensed operators are required for the two units.]

- ~~b. At least one licensed Reactor Operator (RO) shall be in the Control Room when fuel is in the reactor. In addition, while the unit is in MODE 1, 2, 3 or 4, at least one licensed Senior Reactor Operator (SRO) shall be in the Control Room Area.~~

- ~~eb. Shift crew composition shall meet the requirements stipulated herein and in 10 CFR 50.54(m). Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.~~

- ~~ec. A [Health Physics Technician] shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.~~

- ~~ed. Administrative procedures shall be developed and implemented to limit the working hours of personnel who perform safety-related functions (e.g., licensed Senior Reactor Operators (SROs), licensed Reactor Operators (ROs), health physicists, auxiliary operators, and key maintenance personnel).~~

~~The controls shall include guidelines on working hours that ensure adequate shift coverage shall be maintained without routine heavy use of overtime.~~

~~Any deviation from the working hour guidelines shall be authorized in advance by the [Plant Superintendent] or the [Plant Superintendent's] designee, in accordance with approved administrative procedures, and with documentation of the basis for granting the deviation.~~

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## 5.2 Organization

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### 5.2.2 Unit Staff (Continued)

Controls shall be included in the procedures such that individual overtime shall be reviewed monthly by the [Plant Superintendent] or the [Plant Superintendent's] designee to ensure that excessive hours have not been assigned. Routine deviation from the working hour guidelines shall not be authorized.

- fe. The [Operations Manager or Assistant Operations Manager] shall hold an SRO license.
  - gf. The Shift Technical Advisor (STA) shall provide advisory technical support to the Shift Supervisor (SS) in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. In addition, the STA shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.
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## 5.0 ADMINISTRATIVE CONTROLS

### 5.3 Unit Staff Qualifications

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[Reviewer's Note: Minimum qualifications for members of the unit staff shall be specified by use of an overall qualification statement referencing an ANSI Standard acceptable to the NRC staff or by specifying individual position qualifications. Generally, the first method is preferable; however, the second method is adaptable to those unit staffs requiring special qualification statements because of unique organizational structures.]

5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of [Regulatory Guide 1.8, Revision 2, 1987, or more recent revisions, or ANSI Standard acceptable to the NRC staff]. The staff not covered by [Regulatory Guide 1.8] shall meet or exceed the minimum qualifications of [Regulations, Regulatory Guides, or ANSI Standards acceptable to NRC staff].

5.3.2 For the purpose of 10 CFR 55.4, a licensed senior reactor operator (SRO) and a licensed reactor operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).

[Reviewer's Note: The minimum staffing requirements stipulated in 10 CFR 50.54(m), for unit members actively performing the functions of an operator or senior operator, can be exceeded by stipulating the enhanced staffing requirements in paragraph 5.3.2.]

#### 5.5.4 Radioactive Effluent Controls Program

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the DDCH, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the DDCH;
- b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to 10 CFR 20, Appendix B, Table 2, Column 2, *to 10 CFR 20.1001 - 20.2402* *10 times the concentration values in*
- c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the DDCH;
- d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas, conforming to 10 CFR 50, Appendix I;
- e. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the DDCH at least every 31 days;
- f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;
- g. Limitations on the dose rate *from the site* *20.1* resulting from radioactive material released in gaseous effluents *to areas beyond the site boundary* ~~conforming to the dose associated with 10 CFR 20, Appendix B, Table 2, Column 1,~~
- h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;
- i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days  
in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and



beyond the site boundary,

- j. Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

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shall be limited to the following:

1. For noble gases: less than or equal to a dose rate of 500 mrem/yr to the total body and less than or equal to a dose of 3000 mrem/yr to the skin, and
2. For iodine-131, iodine-133, tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: less than or equal to a dose rate of 1500 mrem/yr to any organ.



## Radioactive Effluent Controls Program



This program conforming to 10 CFR 50.36a provides for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by operating procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM;
- b. Limitations on the concentrations of radioactive material released in liquid effluents from the site to UNRESTRICTED AREAS, conforming to 10 times the concentration values in Appendix B, Table 2, Column 2 to 10 CFR 20.1001-20.2402;
- c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents pursuant to 10 CFR 20.1302 and with the methodology and parameters in the ODCM;
- d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas, conforming to 10 CFR 50, Appendix I;
- e. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days;
- f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2 percent of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;
- g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the SITE BOUNDARY shall be limited to the following:
  1. For noble gases: less than or equal to a dose rate of 500 mrem/yr to the total body and less than or equal to a dose rate of 3000 mrem/yr to the skin, and
  2. For iodine-131, iodine-133, tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: less than or equal to a dose rate

of 1500 mrem/yr to any organ;

- h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas at or beyond the site boundary, conforming to 10 CFR 50, Appendix I;
- i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and
- j. Limitations on the annual dose or dose commitment to any member of the public, beyond the SITE BOUNDARY, due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

5.0  
ADMINISTRATIVE CONTROLS

5.7  
High Radiation Area

As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601(a) and (b) of 10 CFR Part 20:

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5.7.1  
High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from Any Surface Penetrated by the Radiation:

- a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.
- b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.
- c. Individuals qualified in radiation protection procedures (e.g., health physics technicians) and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are following plant radiation protection procedures for entry to, exit from, and work in such areas.
- d. Each individual or group entering such an area shall possess:
  1. A radiation monitoring device that continuously displays radiation dose rates in the area; or

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5.7 High Radiation Area

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5.7.1  
(continued)

2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or
  3. A radiation monitoring device that continuously transmits dose rate and cumulative dose to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or
  4. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,
    - (i) Be under the surveillance, as specified in the RMP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or
    - (ii) Be under the surveillance as specified in the RMP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area.
- e. Except for individuals qualified in radiation protection procedures, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them.

5.7.2

High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from Any Surface Penetrated by the Radiation, but Less than 500 rads/hour at 1 Meter from the Radiation Source or from Any Surface Penetrated by the Radiation:

- a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked

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## 5.7 High Radiation Area

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### 5.7.2 (continued)

door or gate that prevents unauthorized entry, and, in addition:

1. All such door and gate keys shall be maintained under the administrative control of the shift supervisor, radiation protection manager, or his or her designee.
  2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.
- b. Access to, and activities in, each such area shall be controlled by means of an RMP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.
- c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RMP or equivalent while performing radiation surveys in such areas provided that they are following plant radiation protection procedures for entry to, exit from, and work in such areas.
- d. Each individual or group entering such an area shall possess:
1. A radiation monitoring device that continuously integrates the radiation rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or
  2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

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## 5.7 High Radiation Area

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### 5.7.2 (continued)

3. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,
    - (i) Be under the surveillance, as specified in the RMP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or
    - (ii) Be under the surveillance as specified in the RMP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area, or
  4. In those cases where options (2) and (3), above, are impractical or determined to be inconsistent with the "As Low As is Reasonably Achievable" principle, a radiation monitoring device that continuously displays radiation dose rates in the area.
  - e. Except for individual qualified in radiation protection procedures, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them.
  - f. Such individual areas that are within a larger area that is controlled as a high radiation area, where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area need not be controlled by a locked door or gate, but shall be barricaded and conspicuous, clearly visible flashing light shall be activated at the area as a warning device.
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