# ENGINEERING CHANGE NOTICE



1. ECN 644788

Proj. ECN

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| 2. ECN Category (mark one) | 3. Originator's Name, Organization, MSIN, and Telephone No. | 4. USQ Required? | 5. Date |
|---|---|---|---|
| Supplemental [] <br> Direct Revision [X] <br> Change ECN [] <br> Temporary [] <br> Standby [] <br> Supersedure [] <br> Cancel/Void [] | MW Benecke, 19120, L6-26, 376-0002 | [] Yes [X] No | 10/25/99 |
| | 6. Project Title/No./Work Order No. HNAK 40021 <br> Fuel Supply Shutdown Facility Interim Operational Safety Requirements CACN:101326/COA: BB20 | 7. Bldg./Sys./Fac. No. <br> 333 | 8. Approval Designator <br> DSQ |
| | 9. Document Numbers Changed by this ECN (includes sheet no. and rev.) <br> WHC-SD-NR-TSR-001 Rev. 0 | 10. Related ECN No(s). <br> N/A | 11. Related PO No. <br> N/A |

| 12a. Modification Work | 12b. Work Package No. | 12c. Modification Work Complete | 12d. Restored to Original Condition (Temp. or Standby ECN only) |
|---|---|---|---|
| [] Yes (fill out Blk. 12b) <br> [X] No (NA Blks. 12b, 12c, 12d) | N/A | N/A <br> Design Authority/Cog. Engineer Signature & Date | N/A <br> Design Authority/Cog. Engineer Signature & Date |

13a. Description of Change

13b. Design Baseline Document? [X] Yes [] No

Redesignate document as HNF-SD-NR-TSR-001.

*Update classification for individual buildings, including the non-fuel storage buildings.*

Revise minimum staffing requirements.

Provide recovery action to address failure to meet minimum staffing requirements during Operations Mode.

Add administrative controls to ensure availability of the fire protection systems for the fuel storage buildings.

Design verification performed by independent peer review

14a. Justification (mark one)

| | | | |
|---|---|---|---|
| Criteria Change [X] | Design Improvement [] | Environmental [] | Facility Deactivation [] |
| As-Found [] | Facilitate Const [] | Const. Error/Omission [] | Design Error/Omission [] |

14b. Justification Details

Reflects reclassification of 333 and 303-E buildings from nuclear Category 3 to radiological; allows other trained personnel to function as the second person during the Operation Mode; provides recovery following circumstances when second person is unavailable during the Operations Mode; and ensures availability of the fire protection systems for the fuel storage buildings to make the probability of an unmitigated fire extremely unlikely.

15. Distribution (include name, MSIN, and no. of copies)

| | | | | |
|---|---|---|---|---|
| RW Bailey | S4-49 | JA Remaize | L6-26 | |
| MW Benecke | L6-26 | ~~HE Rew~~ | ~~L1-01~~ | DJ Riffe L1-06 |
| JR Bishop | L6-26 | RL Stephenson | L6-26 | mwb 9/05/00 |
| ~~KK Chitkara~~ | A3-02 | ~~KE Schwartz~~ | L6-26 | |
| AM Horner | L6-57 | JM Steffen | ~~N1-49~~ | L1-06 |
| ~~IL Metcalf~~ | L6-26 | LR Willis | L6-26 | |

mwb 9/05/00

SEP 06 2000 RELEASE STAMP

DATE: STA: 15 HANFORD RELEASE ID: 65

A-7900-013-2 (05/96) GEF095

# ENGINEERING CHANGE NOTICE



1. ECN (use no. from pg. 1): 644788

| 16. Design Verification Required | 17. Cost Impact | | | | 18. Schedule Impact (days) | |
|---|---|---|---|---|---|---|
| | ENGINEERING | | CONSTRUCTION | | | |
| [x] Yes | Additional | [] $ | Additional | [] $ | Improvement | [] |
| [] No | Savings | [] $ | Savings | [] $ | Delay | [] |

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

| | | | | | |
|---|---|---|---|---|---|
| SDD/DD | [] | Seismic/Stress Analysis | [] | Tank Calibration Manual | [] |
| Functional Design Criteria | [] | Stress/Design Report | [] | Health Physics Procedure | [] |
| Operating Specification | [] | Interface Control Drawing | [] | Spares Multiple Unit Listing | [] |
| Criticality Specification | [] | Calibration Procedure | [] | Test Procedures/Specification | [] |
| Conceptual Design Report | [] | Installation Procedure | [] | Component Index | [] |
| Equipment Spec. | [] | Maintenance Procedure | [] | ASME Coded Item | [] |
| Const. Spec. | [] | Engineering Procedure | [] | Human Factor Consideration | [] |
| Procurement Spec. | [] | Operating Instruction | [] | Computer Software | [] |
| Vendor Information | [] | Operating Procedure | [] | Electric Circuit Schedule | [] |
| OM Manual | [] | Operational Safety Requirement | [] | ICRS Procedure | [] |
| FSAR/SAR | [] | IEFD Drawing | [] | Process Control Manual/Plan | [] |
| Safety Equipment List | [] | Cell Arrangement Drawing | [] | Process Flow Chart | [] |
| Radiation Work Permit | [] | Essential Material Specification | [] | Purchase Requisition | [] |
| Environmental Impact Statement | [] | Fac. Proc. Samp. Schedule | [] | Tickler File | [] |
| Environmental Report | [] | Inspection Plan | [] | | [] |
| Environmental Permit | [] | Inventory Adjustment Request | [] | | [] |

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

| Document Number/Revision | Document Number/Revision | Document Number Revision |
|---|---|---|
| None | | |

21. Approvals

| | Signature | Date |
|---|---|---|
| Design Authority | MW Benecke MSB 1/27/00 | 11/29/99 |
| Cog. Eng. MW Benecke | MW Benecke | 11/29/99 |
| Cog. Mgr. IL Metcalf | MSB 1/27/00 | 11/29/99 |
| ESQ&H DJ Riffe | DJR 1-27-00 | 11-29-99 |
| | | |
| | | |
| FSS Peer Review | | |
| KE Schwartz | KE Schwartz | 11-29-99 |
| FDH RCP Peer Review | | |
| RL Hill | RL Hill | 11/29/99 |
| Safety Review Board Review | | |
| JM Steffen | JMS 11/27/00 | 11/29/99 |
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| | Signature | Date |
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| Design Agent | | |
| PE | | |
| QA | | |
| Safety | | |
| Design | | |
| Environ. | | |
| Other | | |
| | | |
| | | |
| DEPARTMENT OF ENERGY | | |
| Signature or a Control Number that tracks the Approval Signature | OO-FTD-061 | 5/31/00 |
| ADDITIONAL | | |
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# DISTRIBUTION SHEET

| To | From | Page 1 of 1 |
|---|---|---|
| Distribution | M. W. Benecke | Date August 30, 2000 |
| Project Title/Work Order | | EDT No. |
| *HNF-SD-NR-TSR-001, Rev. 1* Fuel Supply Shutdown Facility Interim Operational Safety Requirements | | ECN No. 644788 |

| Name | MSIN | Text With All Attach. | Text Only | Attach./ Appendix Only | EDT/ECN Only |
|---|---|---|---|---|---|
| M. W. Benecke | L6-26 | x | | | |
| A. M. Horner | L6-57 | x | | | |
| D. J. Riffe | L5-66 | x | | | |
| J. M. Steffen | L5-66 | x | | | |
| J. A. Remaize | L6-26 | x | | | |
| R. D. Lipp | L6-26 | x | | | |
| | | | | | |
| | | | | | |
| C. J. Borsted | A5-14 | x | | | |
| M. T. Collopy | A5-14 | x | | | |
| P. J. Garcia | A5-14 | x | | | |
| S. S. Seth | A5-11 | x | | | |
| | | | | | |
| | | | | | |
| Central Files | A3-88 | x | | | |
| 333 Bldg. Facility File | L6-26 | x | | | |
| DOE Reading Room | H2-53 | x | | | |
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HNF-SD-NR-TSR-001
Revision 1

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# FUEL SUPPLY SHUTDOWN FACILITY INTERIM OPERATIONAL SAFETY REQUIREMENTS

*Prepared for the U.S. Department of Energy*
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
*U.S. Department of Energy under Contract DE-AC06-96RL13200*
**Fluor Hanford**
P.O. Box 1000
Richland, Washington

HNF-SD-NR-TSR-001
Revision 1
ECN 644788

# FUEL SUPPLY SHUTDOWN FACILITY INTERIM OPERATIONAL SAFETY REQUIREMENTS

Document Type: TSR Division: RCP

M. W. Benecke
Fluor Hanford, Inc.

J. R. Brehm
Fluor Federal Services

R. L. Besser
DE&S Northwest, Inc.

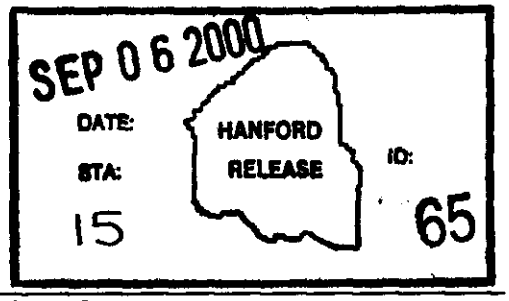
J. A. Remaize
Fluor Hanford, Inc.

Date Published
September 2000

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

**Fluor Hanford**
P.O. Box 1000
Richland, Washington




Release Approval — Date — Release Stamp

Total Pages: 26

# FUEL SUPPLY SHUTDOWN FACILITY INTERIM OPERATIONAL SAFETY REQUIREMENTS

ECN 644788

Org Code 1B300
Charge Code 101326
COA BB20

**Key Words: Interim Operational Safety Requirements (IOSR), Fuel Supply Shutdown Facility, safe boundaries, administrative controls**

**Abstract: The Interim Operational Safety Requirements for the Fuel Supply Shutdown (FSS) Facility define acceptable conditions, safe boundaries, bases thereof, and management of administrative controls to ensure safe operation of the facility.**

# RECORD OF REVISION

(1) Document Number: HNF-SD-NR-TSR-001



(2) Title: Fuel Supply Shutdown Facility Interim Operational Safety Requirements

Change Control Record

| (3) Revision | (4) Description of Change - Replace, Add, and Delete Pages | Authorized for Release | | |
|---|---|---|---|---|
| | | (5) Cog. Engr. | (6) Cog. Mgr. | Date |
| 0 | (7) EDT-141811, 5/23/95 | | | |
| 1 RS | Complete update (ECN 644788) | MW Barnaby 9/05/00 | MW Barnaby 9/05/00 | |
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# PREFACE

These Interim Operational Safety Requirements (IOSR) for the Fuel Supply Shutdown (FSS) facility define acceptable conditions, safe boundaries, bases thereof, and management or administrative controls required to ensure safe operation of the facility.

This IOSR and its appendices constitute a commitment between the U.S. Department of Energy (DOE) and Fluor Daniel Hanford Company regarding the safe operation of the facility. As such, the IOSR cannot be changed without the approval of the Program Secretarial Officer (PSO), or designee.

The scope of this IOSR is based on the Interim Safety Basis Document (ISB) (Benecke, et al. 2000).

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# TABLE OF CONTENTS

List of Terms

| | |
|---|---|
| AC | Administrative Control |
| DOE | U.S. Department of Energy |
| FSS | Fuel Supply Shutdown facility |
| IOSR | Interim Operational Safety Requirement |
| ISB | Interim Safety Basis |
| LCO | Limiting Condition for Operation |
| LCS | Limiting Control Setting |
| NFPA | National Fire Protection Association |
| PSO | Program Secretarial Officer |
| SAR | Safety Analysis Report |
| SL | Safety Limit |
| SR | Surveillance Requirement |

# Section 1 USE AND APPLICATION

----------NOTE----------
*These IOSRs apply specifically to the FUEL MATERIAL storage buildings identified in Section 1.2 MODES. Other buildings included in the FSS facility do not require inclusion in these IOSRs based on the IOSR selection criteria and the conclusions found in the ISB (Benecke, et al. 2000).*
---

## 1.1 Definitions

----------NOTE----------
*The defined terms of this section are unique definitions. They appear in CAPITALIZED type and are applicable throughout these IOSRs and BASES. Some terms in this section refer the user to another section for the definition. This has been provided to prevent a shortened definition from being supplied and used out of context.*
---

| Term | Definition |
|---|---|
| COMBUSTIBLE MATERIAL | Material associated with a FUEL MATERIAL storage building that is capable of ignition and sustained burning. |
| DESIGN FEATURES | See Appendix A, DESIGN FEATURES. |
| FUEL MATERIAL | Low enriched ($\leq$ 1.25 weight percent $^{235}U$) fissile material in the form of uranium billets, work-in-process fuel elements (includes scrap pieces) or assembled fuel elements. |
| MODE | See Section 1.2, MODES. |
| VERIFY/VERIFIED/ VERIFICATION | A qualitative assessment to confirm or substantiate that specific facility conditions exist, and if not in this condition, ensure that a response is taken to satisfy the requirements in accordance with approved and controlled procedures. This may include collecting sample data or quantitative data; taking instrument readings; recording data and information on logs, data sheets or electronic media; and evaluating data and information in accordance with approved and controlled procedures. |
| VIOLATION | See Section 5.1, Interim Operational Safety Requirements VIOLATIONS. |
| FIRE PROTECTION SYSTEM | The combination of fire detection, alarm, and automatic fire suppression system associated with a Category 3 nuclear facility. |

## 1.2 MODES

The following defined MODES are to be applied to the FUEL MATERIAL storage buildings (current and potential) identified in the table at the end of this MODES section.

| | |
|---|---|
| OPERATION | The FSS building is considered active. The building is storing FUEL MATERIAL. The building has been unlocked, and personnel may be present in the building. Facility shutdown and FUEL MATERIAL disposition activities may occur. FUEL MATERIAL movement may occur. |
| STORAGE | The FSS building is considered active. The building is storing FUEL MATERIAL. The building has been locked, no personnel are present, and no activities are being performed in the building. |
| SURVEILLANCE | The FSS building is considered active. No FUEL MATERIAL is stored in the building. |

Documentation of MODE status for each FUEL MATERIAL storage building of the FSS facility shall be maintained current as required in Section 5.2, Configuration Management. MODE status shall be maintained for the following FUEL MATERIAL storage buildings (current and potential):

| |
|---|
| 303-A, 303-B, 303-G, 3712, 3716 |

## 1.3 Completion Times

**[Not applicable for the FSS facility.]**

## 1.4 Safety Limits (SLs)

SLs are limits on process variables associated with those primary physical barriers, generally passive, that are necessary for the intended facility function and which are found to be required to guard against the uncontrolled release of radioactivity, which would result in a dose consequence of greater than 0.5 rem to the offsite public.

**[There are no SLs identified for the FSS facility based on these selection criteria and the conclusions found in the ISB (Benecke, et al. 2000).]**

## 1.5 Limiting Control Settings (LCSs)

LCSs are settings on safety systems that control process variables to prevent exceeding Safety Limits (SLs).

**[Since there are no SLs identified for the FSS facility, there are no LCSs based on these selection criteria.]**

## 1.6 Limiting Conditions for Operation (LCOs)

LCOs are the lowest functional capability or performance level of safety-related structures, systems, components, and their support systems required for normal safe operation.

LCOs shall be based on maintaining the systems, structures, and components (SSC) OPERABLE, or on maintaining conditions within specified limits required to assure risk guidelines are not exceeded for the public or onsite workers .

**[There are no LCOs identified for the FSS facility based on these selection criteria and the conclusions found in the ISB (Benecke, et al 2000).]**

## 1.7 Surveillance Requirements (SRs)

SRs are requirements relating to testing, calibration, or inspection to ensure that the necessary OPERABILITY and quality of safety-related structures, systems, components, and their support systems, or specified conditions required for safe operation of the facility, are maintained.

**[Since there are no LCOs identified for the FSS facility, there are no associated SRs based on these selection criteria.]**

## 1.8 Administrative Controls (ACs)

ACs are the provisions relating to organization and management, procedures, recordkeeping, reviews, and audits necessary to ensure safe operation of the facility.

These programs include fuel and combustible material inventory control, configuration management, nuclear criticality safety, fire protection system availability, occurrence reporting, and organization.

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# Section 3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

## 3.0/4.0 LIMITING CONDITIONS FOR OPERATION (LCO) AND SURVEILLANCE REQUIREMENTS (SRs) APPLICABILITY

There are no LCOs and SRs identified for the FSS facility. Additionally, the General Rules of Applicability for LCOs and SRs are not applicable.

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# Section 5 ADMINISTRATIVE CONTROLS

## 5.1 Interim Operational Safety Requirements VIOLATIONS

### 5.1.1 VIOLATION Criteria

VIOLATIONS of the IOSR occur as the result of any of four circumstances:

a. Exceeding an SL **[not applicable for the FSS facility]**.

b. Failure to take the ACTIONS required within the required time limit following:

1. Exceeding an LCS **[not applicable for the FSS facility]**.

2. Failure to meet an LCO **[not applicable for the FSS facility]**.

3. Failure to successfully meet an SR **[not applicable for the FSS facility]**.

c. Failure to perform a Surveillance within the required time limit. **[Not applicable for the FSS facility]**.

d. Failure to comply with an AC requirement. (Failure to follow a procedure within a required program does not necessarily constitute a VIOLATION.)

### 5.1.2 Response to a Safety Limit VIOLATION

**[Not applicable for the FSS facility]**.

### 5.1.3 Response to a Limiting Condition for Operation and Limiting Control Setting VIOLATION

**[Not applicable for the FSS facility]**.

### 5.1.4 Response to a Surveillance Requirement VIOLATION

**[Not applicable for the FSS facility]**.

### 5.1.5 Response to an Administrative Control VIOLATION

If a VIOLATION of an AC occurs, proceed as follows:

a. Verify safe and stable FSS facility conditions.

b. Notify DOE of the VIOLATION in accordance with DOE occurrence reporting requirements.

c. Prepare an Occurrence Report in accordance with DOE occurrence reporting requirements.

d. Prepare a recovery plan describing the steps leading to compliance with the AC.

e. Perform and document a technical evaluation, if appropriate, of the AC VIOLATION to determine if any damage may have occurred.

## 5.2 Configuration Management

### 5.2.1 Requirement for Configuration Control

A program shall be established, implemented, and maintained for FSS facility configuration control.

### 5.2.2 Program Key Elements

The program key elements include the following:

a. FSS facility design, modification, structural integrity, and procedure change control.

b. Unreviewed Safety Question screening.

c. FSS facility reviews and audits.

d. MODE status control.

e. Record retention.

## 5.3 Organization

5.3.1 Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all safety and operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation.

The individuals who train the operating staff and those who carry out safety and quality assurance functions shall have sufficient organizational freedom to ensure their independence from operating pressures.

The contractor is responsible for ensuring that the requirements of the FSS IOSR are met. Compliance shall be demonstrated by:

a. Operating within the Safety Limits (SLs), **[not applicable for the FSS facility]**.

b. Operating within the Limiting Conditions for Operation (LCOs), Limiting Control Settings (LCSs) and the associated Surveillance Requirements (SRs) during their Applicability, **[not applicable for the FSS facility]**.

c. Operating within the Limiting Control Settings (LCSs) and the associated Surveillance Requirements (SRs) during their applicability, **[not applicable for the FSS facility]**.

d. Operating within the ACTIONS of LCOs and LCSs when required, **[not applicable for the FSS facility]**.

f. Performing all SRs as required, **[not applicable for the FSS facility]**.

g. Establishing, implementing, and maintaining the required ACs, and

h. Maintaining required DESIGN FEATURES.

5.3.1.1 Facility Manager

The FSS facility Manager shall be responsible for safe operation within the facility. Safe operation shall include, as necessary, interface requirements with other onsite organizations and facilities including the required review designators.

5.3.1.2 Minimum Operations Shift Complement

The number of "Qualified Shift Leads" (exempt personnel with facility-specific Fissionable Material Handler qualification) and "Other Qualified Personnel" (also with facility-specific Fissionable Material Handler qualification) available shall be adequate to operate and support the FSS facility safely. Abnormal plant conditions shall be considered in determining assignments. Management shall provide additional personnel, as necessary, to support other activities.

The minimum operations shift complement per shift for an unsecured building shall be as follows:

MINIMUM OPERATIONS SHIFT COMPLEMENT

| | OPERATION | STORAGE | SURVEILLANCE |
|---|---|---|---|
| Qualified Shift Lead | 1 | 0 | 0 |
| Other Qualified Personnel | 1 | 0 | 0 |

5.3.1.3 The minimum complement can be 1 less than the required number for a period of time not to exceed 2 hours in the OPERATION MODE, to accommodate unexpected absences. Immediate action is to be taken to restore the shift complement to within the minimum requirements, and fuel storage configuration and the building must be inspected by a second qualified person prior to closing the storage facility when this situation occurs.

5.3.1.4 The "Qualified Shift Lead" must be present within the FSS Project Facility. If not physically at the building in the OPERATION MODE, two "Other Qualified Personnel" must be at or within the affected building to ensure fissionable material is not mishandled.

5.4 Occurrence Reporting

5.4.1 Requirement for Occurrence Reporting

A program shall be established, implemented, and maintained for occurrence reporting of events and conditions that may involve safety, health, quality, safeguards, security, or environmental implications. It is the policy of facility management to encourage a positive attitude toward reporting occurrences and that occurrences be consistently reported to assure that both DOE and Contractor line management are kept fully and currently informed of all events that could: (1) affect the health and safety of the public; (2) seriously impact the intended purpose of DOE facilities; (3) have a noticeable adverse effect on the environment; or (4) endanger the health and safety of workers.

5.4.2 Program Key Elements

The program key elements include the following:

a. Timely identification, categorization, notification, and reporting to DOE and contractor management of all Reportable Occurrences.

b. Timely evaluation of and implementation of appropriate corrective actions.

c. Maintenance of a database containing all FSS facility Occurrence Reports.

d. Review of Reportable Occurrences to assess significance, root causes, generic implications, and the basis for any corrective actions taken to prevent recurrence.

e. Dissemination of Occurrence Reports.

5.4.3 Reporting requirements for IOSR VIOLATIONS are described in AC 5.1, Interim Operational Safety Requirements VIOLATIONS.

5.5 Nuclear Criticality Safety

5.5.1 Requirement for Nuclear Criticality Safety

A program shall be established, implemented and maintained to prevent an accidental criticality in the FSS facility.

5.5.2 Program Key Elements

The program key elements include the following:

a. Approved and controlled criticality safety analyses, operating specifications, Criticality Prevention Specifications and procedures.

b. Double contingency principle.

c. Mass, distribution, geometry and spacing controls.

d. Nuclear criticality safety training.

e. Posting of criticality control limits.

f. Provisions for written recovery plans to be utilized when criticality control limits are exceeded.

g. Provisions for notifying DOE when criticality control limits are exceeded.

h. Limiting fuel handling to quantities less than the minimum hemispherical safe mass quantities.

i. Performing periodic surveillance of uranium storage building drain systems.

## 5.6 FUEL MATERIAL and COMBUSTIBLE MATERIAL Inventory Control

### 5.6.1 Requirement for FUEL MATERIAL and COMBUSTIBLE MATERIAL Inventory Control

A program shall be established, implemented, and maintained for FUEL MATERIAL and COMBUSTIBLE MATERIAL inventory control. The program shall be based on maintaining the inventory of FUEL MATERIAL and associated COMBUSTIBLE MATERIAL (wood, cardboard, plastics, etc.) loading density at values that limit potential consequences of an unmitigated uranium storage building fire to the HNF-PRO-704 Risk Evaluation Guidelines defined for "extremely unlikely" events as established in the FSS facility ISB (Benecke, et al 2000).

### 5.6.2 Program Key Elements

The program includes procedures and auditable records that assure the FSS facility remains at or below a source term inventory for a single building which maintains toxicological dose consequence below 10.0 mg U/$m^3$ and 100 $\mu$g Be/$m^3$ (onsite), and 0.6 mg U/$m^3$ and 25 $\mu$g Be/$m^3$ (offsite).

## 5.7 FIRE PROTECTION SYSTEM Availability

### 5.7.1 Requirement for FIRE PROTECTION SYSTEM Availability

A program shall be established, implemented, and maintained for ensuring the operability of the FIRE PROTECTION SYSTEMS associated with the Category 3 nuclear facilities. This program will ensure that the probability of an unmitigated uranium storage building fire is extremely unlikely as defined in the FSS facility ISB (Benecke, et al 2000).

Program Key Elements

1. The program includes procedure(s) and auditable records that assure the FIRE PROTECTION SYSTEMS associated with the uranium fuel storage buildings are maintained as prescribed by HNF-PRO-351, *System Testing/Inspecting and Maintenance Frequencies*. This incorporates NFPA requirements subject to exemptions granted to DOE-RL.

2. Performing independent verification of valve positions following maintenance of FIRE PROTECTION SYSTEMS.

3. Performing independent verification of component identification following modification of FIRE PROTECTION SYSTEMS.

## Section 6 REFERENCES

The following references are for the IOSR and its Appendices:

DOE, 1992, *Technical Safety Requirements*, DOE Order 5480.22, U.S. Department of Energy, Washington, D.C.

Benecke, M. W., 2000, *Hazard Categorization for Fuel Supply Shutdown Facility*, HNF-SD-NR-HC-006, Rev. 1, Fluor Daniel Hanford Company, Richland, Washington (pending approval).

M. W. Benecke, J. R Brehm, T. L. Deobald, and J. A. Remaize, 2000, *Interim Safety Basis for Fuel Supply Shutdown Facility*, HNF-SD-NR-ISB-001, Rev. 1, Fluor Daniel Hanford Company, Richland, Washington (pending approval).

# Appendix A DESIGN FEATURES

As stated in DOE Order 5480.22 (DOE 1992), the purpose of the DESIGN FEATURES Appendix is to describe in detail those features not covered elsewhere in the IOSR that, if altered or modified, would have a significant effect on safety. Until a facility has a DOE-approved SAR, a DESIGN FEATURES Appendix should be included with the IOSR. After DOE approves a facility SAR, the Appendix may be eliminated, provided that assurance is made that the provisions of the Appendix are present in the approved SAR or elsewhere in the IOSR. The four areas to be addressed are vital passive components, configuration and physical arrangement, materials and site characteristics. The following definitions were taken from DOE Order 5480.22 (DOE 1992):

a. Vital passive components are essentially piping, vessels, supports, structures (such as confinement) and containers.

b. The DESIGN FEATURES Appendix should also address configuration and physical arrangement where it is a safety concern.

c. If safe operation of the facility is dependent on any component being constructed of a particular material, that requirement should be discussed in the DESIGN FEATURES Appendix.

d. Site characteristics, such as the locations of public access roads, collocated facilities, facility area boundaries, site boundaries, nearest residence distances, etc., should be presented in the DESIGN FEATURES Appendix.

Based on the above definitions DESIGN FEATURES are identified and described in the FSS facility ISB (Benecke, et al 2000).

Appendix B BASES

This Appendix provides summary statements of the reasons for the Limiting Conditions for Operation and associated Surveillance Requirements. The BASES describe how the limit(s), the Applicability, the Condition(s), and the Surveillance(s) will maintain operation of the facility within the safety envelope. The primary purpose for describing the BASES for these requirements is to provide the operations and engineering staff with the necessary information to maintain operation of the facility within the safety envelope and to ensure that any future changes to these requirements will not affect their original intent or purpose. **[Not applicable for the FSS facility].**

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