U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

SUNSI Review for Updating FSARs

TRTR Annual Conference
September 2025

Non-Power Production and Utilization Facility (NPUF)
Licensing Branch, U.S. NRC

Overview

- Defining SUNSI
- How to Redact
- Practice Redacting
- Submission on the Docket
- Applicable Guidance

Sensitive Unclassified Non-Safeguards Information (SUNSI)

What is classified as SUNSI?

- Personally identifiable information (PII)
- Proprietary or trade secrets (e.g., 10 CFR 2.390)
- Security-related information (but not classified)
- Privacy Act information

Security-Related Information

- Information withheld per 10 CFR 2.390
- Information that may qualify as Critical Infrastructure Information as defined by other agencies
- Information that could be useful, or could reasonably be expected to be useful to a terrorist in a potential attack that does not qualify as Safeguards or Classified Information
- Sensitive Homeland Security Information – Department of Homeland Security to define

Regulatory Basis: Redactions

10 CFR 2.390 “Public inspections, exemptions, requests for withholding”

(b) (1): “The submitter shall request withholding at the time the document is submitted and shall comply with the document marking and affidavit requirements set forth in this paragraph.”

Regulatory Basis: What to do

10 CFR 2.390 (b) (1) (i)

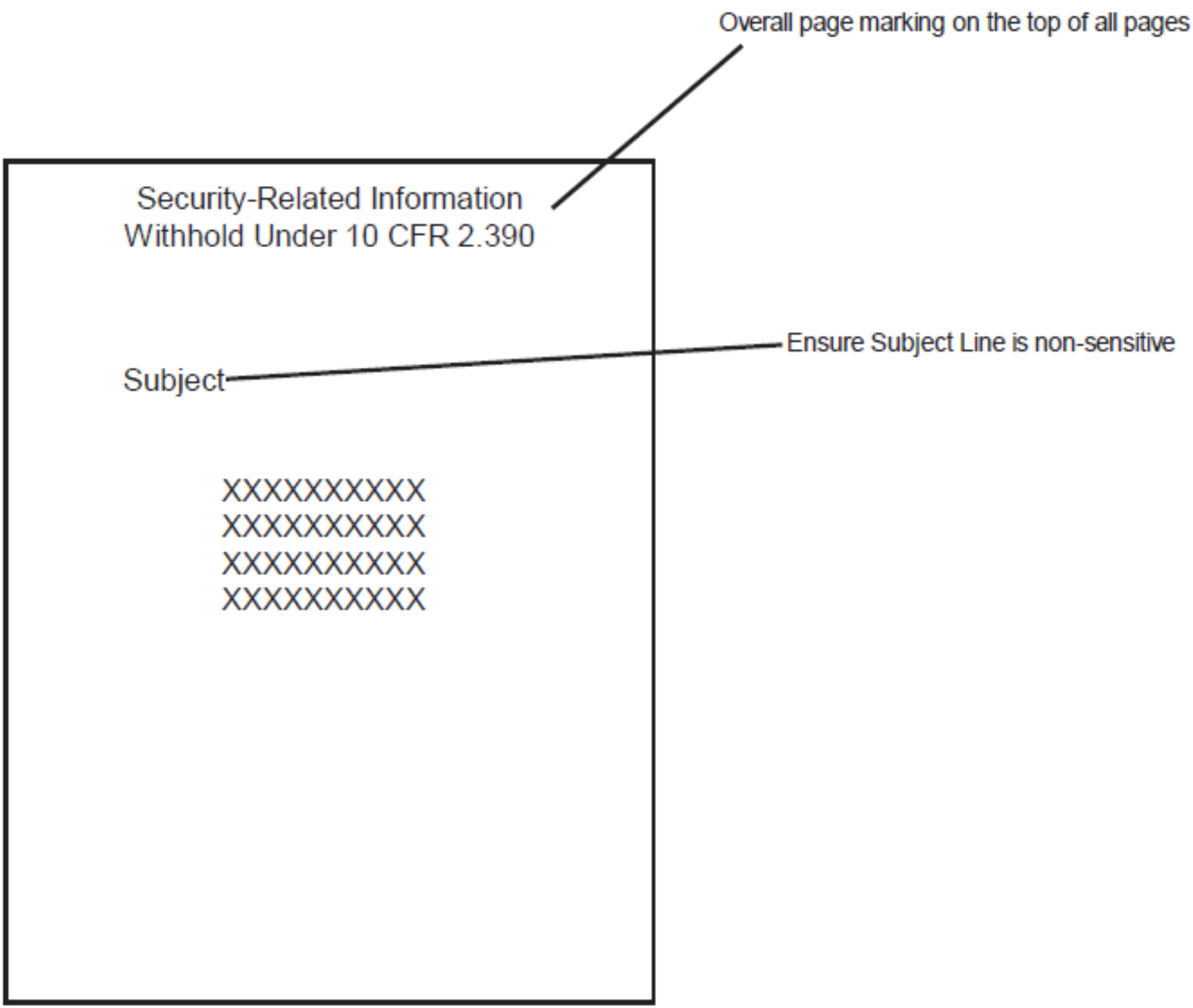
(A): “The first page of the document, and each successive page containing such information, must be marked so as to be readily visible, at the top, or by electronic watermark or other suitable marking on the body of the page, with language substantially similar to: “confidential information submitted under 10 CFR 2.390,” “withhold from public disclosure under 10 CFR 2.390,” or “proprietary,” to indicate that it contains information the submitter seeks to have withheld.”

(B): “Each document or page, as appropriate, containing information sought to be withheld from public disclosure must indicate, adjacent to the information, or as specified in paragraph (b)(1)(i)(A) of this section if the entire page is affected, the basis (i.e., trade secret, personal privacy, etc.) for proposing that the information be withheld from public disclosure under paragraph (a) of this section.”

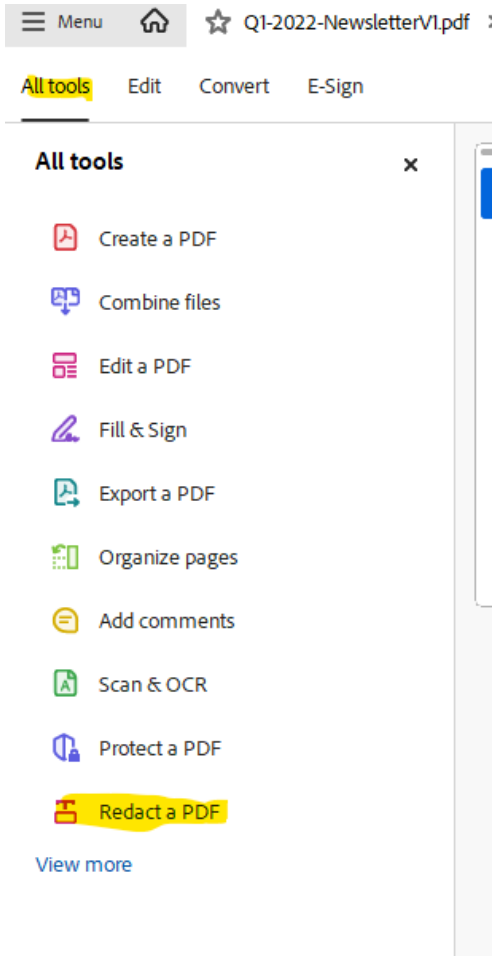
How to Mark Pages for Redactions

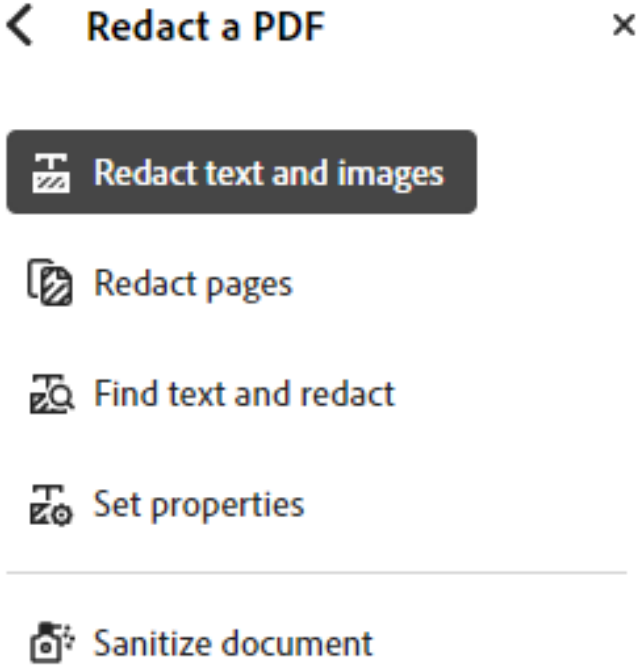
See RIS 2005-26

ML051430228


Overall page marking on the top of all pages
Security-Related Information
Withhold Under 10 CFR 2.390
Ensure Subject Line is non-sensitive
Subject
XXXXXXXXXX
XXXXXXXXXX
XXXXXXXXXX
XXXXXXXXXX

How to Redact (Adobe)





Redact a PDF

Redact text and images

Redact pages

Find text and redact

Set properties

Sanitize document

Apply

March 8-10, 2022

34th Regulatory Information Conference
Virtual Conference

March 24-25, 2022

Nuclear Innovation Conference
Amsterdam, Netherlands

April 11-13, 2022

Council on Ionizing Radiation Measurements and Standards
Virtual Conference

25–28 April 2022

Internationa
Fast Reacto
Fuel Cycles
Clean Ener
Beijing, China

May 15–2

Internationa
Physics of
Pittsburgh, PA

May 23-26

Women In
Annual Cor
Tokyo, Japan

June 12-1

Conference

Virtual Conference

University of Massachusets - Lowell

How to Redact (Word)

Example

Before:

The quick brown fox jumped over the lazy frog.

After:

The [ ] fox jumped over the lazy frog.

Helpful Hints

- **Do not:**
  - Use white text for redactions
  - Hit the “apply” for each individual redaction
  - Put SRI or other SUNSI into AI
- **Do:**
  - Keep two copies, one with redactions, one without
  - Submit both copies of the FSAR (redacted and non-redacted) on the docket
  - Reach out to your PM if you have questions

What do we Redact?

Chapter 1: General Description of the Facility

Information Allowed for Public Disclosure:

- Decisions regarding the control of information (usually drawings) that describe facility sites and buildings are dependent on the level of detail.
- Information clearly visible from locations accessible to the public near the site.
- This includes general (low-resolution) layout drawings of the site and adjacent areas. Photographs of the reactor or facility. History of the facility including past and planned upgrades.

Withhold:

- Site coordinates and drawings showing details such as the specific locations of the reactor, fuel storage area, safety and security equipment within buildings, doorways, stairways, etc.

Chapter 2: Site Characteristics

Information Allowed for Public Disclosure:

- Meteorology.
- Hydrologic Engineering.
- Geology, seismology, and geotechnical engineering.
- Normal building code for SSCs.
- Analyses on SSCs that show the design feature will withstand combinations of forces with design basis events and natural hazards.

Withhold:

- Reactor Coordinates
- Infrastructure that could aid an adversary in an attack on a facility (pipelines, chemical facilities, other industrial facilities, etc.). Check guidance from DHS, FERC, EPA, DOT guidance regarding what needs to be redacted.
- Information about nearby dams (FERC).
- Information about structural design that could be useful to an adversary (reactor location in the building, pool or building wall thickness, and/or construction details beyond the scope of normal building codes).

Chapter 3: Design of Structures, Systems, and Components

Information Allowed for Public Disclosure:

- No specific comments on this chapter.

Withhold:

- Information that could assist in theft of material (facility access controls, fuel locations, fuel handling info, etc.).
- Reactor location within the reactor building or underground.
- Specifications on the biological shield (construction, size, thickness, etc.).

Chapter 4: Reactor Description

Information Allowed for Public Disclosure:

- Discussions of reactor physics where similar information is available in textbooks or other public areas.
- Drawings of the reactor or components that do not have dimensions.
- Enrichment is not withheld.

Withhold:

- Fuel specifications including but not limited to dimensions, weight, quantity of U-235, and the number of elements at the facility.
- Diagrams of the reactor that shows specific locations of fuel or sources.

Chapter 5: Reactor Coolant Systems

Information Allowed for Public Disclosure:

- Descriptions of the system or component drawings generally should not be withheld.

Withhold:

- Design and operational information concerning the coolant system if the system loss could result in fuel failure (useful for sabotage).
- Details about the coolant system design that would assist a potential adversary in draining the pool.

Chapter 6: Engineered Safety Features

Information Allowed for Public Disclosure:

- Information provided to the NRC on engineered safety features, usually relating to the design, maintenance, or operation during routine activities or design basis transients (i.e., non-security related events), and is not treated as sensitive.

Withhold:

- Detailed layout drawings showing the actual location of equipment.
- Discussions of safety features or mitigation strategies within security/consequence assessments should be treated as SGI (e.g. ventilation systems and confinement and containment systems that may be disabled or reconfigured to increase dispersion of radioactive material during sabotage or other events that an adversary may initiate).

Chapter 7: Instrumentation and Control

Information Allowed for Public Disclosure:

- Descriptions of the instrumentation and control systems generally should not be withheld.

Withhold:

- Information that could be used to determine how to bypass detectors and other instrumentation that is part of the detection and communications systems related to physical security or emergency response.
- Information of the uranium content and enrichment of fission detectors.

Chapter 8: Electric Power

Information Allowed for Public Disclosure:

- Information provided to the NRC on offsite and onsite electric power systems typically relate to their design, maintenance, or operation during routine activities or design basis transients (i.e., non-security related events) and is typically not treated as sensitive.

Withhold:

- Specific information a facility provides that lend it to being easily susceptible to a loss of power (e.g., main power supply enters through a particular area) with potential radiological consequence.
- Information regarding the loss of emergency power which could result in radiological consequences.

Chapter 9: Auxiliary Systems (Fuel Storage, Ultimate Heat Sink)

Information Allowed for Public Disclosure:

- General (low-resolution) layout drawings of the site and descriptions and drawings may be released.

Withhold:

- Drawings showing details such as the specific location of spent fuel in the reactor or spent fuel pools, equipment, doorways, stairways, details and location of fuel handling tools, etc.
- Specific information concerning new or irradiated fuel sources, or other highly radioactive material handling.

Chapter 10: Experimental Facilities and Utilization

Information Allowed for Public Disclosure:

- Descriptions of experimental facilities and their uses generally should not be withheld.

Withhold:

- Drawing of beam ports, or other accessible areas to the reactor.

Chapter 11: Radiation Protection, Radioactive Waste Management

Information Allowed for Public Disclosure:

- General (low-resolution) layout drawings of the site and adjacent areas may be released.
- Expected levels of radiation waste produced.

Withhold:

- Drawings showing details such as the specific location of equipment, waste storage, doorways, stairways, etc.
- Specific locations and amounts of radioactive sources or waste material.

Chapter 12: Conduct of Operations

Information Allowed for Public Disclosure:

- Descriptions of how a facility will conduct operations generally should not be withheld.

Withhold:

- Information on fuel handling or shipments that will facilitate theft of fuel.
- Components, procedures, plans, and memoranda of understanding with federal, state, and local governments related to facility security or emergency response.

Chapter 13: Accident Analysis

Information Allowed for Public Disclosure:

- Doses for accident analyses should be made publicly available.

Withhold:

- Information that could be useful to an adversary to create a significant radioactive release, e.g., if a specific cooling water valve must remain open to ensure adequate fuel cooling, redact the information associated to the valve.
- Some MHA scenarios specify incredible conditions necessary for an accident to occur. Redact information that could be useful to an adversary to create the incredible condition, e.g., operator action to prevent a significant condition.

Chapter 14: Technical Specifications

Information Allowed for Public Disclosure:

- Operating limits and Limiting Safety System Settings.

Withhold:

- Any TSs that give specific fuel design or core configuration information should be withheld under 10 CFR 2.390.

Other Subject Areas

Quality Assurance

Uncontrolled

Fire Protection

Information Allowed for Public Disclosure:

- Most information related to fire protection will not need to be designated as sensitive.

Withhold:

- Drawings showing details such as the specific location of the reactor, spent fuel, or radioactive source storage should be withheld.

Emergency Planning

Information Allowed for Public Disclosure:

Withhold:

- Special attention is needed to determine if information relates to the response by a licensee or government agency to an attack or security event. Note that some states and local governments consider parts of their emergency plans to be sensitive.
- Specific maps, floor layouts, and other pictures showing doorways, the reactor, fuel/radiation sources, etc.

Security

- Information related to security programs at NPUFs is designated as SGI and is protected in a manner similar to classified confidential information.
- Withhold information on access controls to the facility (e.g., card readers, locked doors, after hour control, etc.) that could aid an adversary's access to the facility or fuel; cameras or other security equipment that is mentioned in other sections to describe auxiliary purposes.

Examples

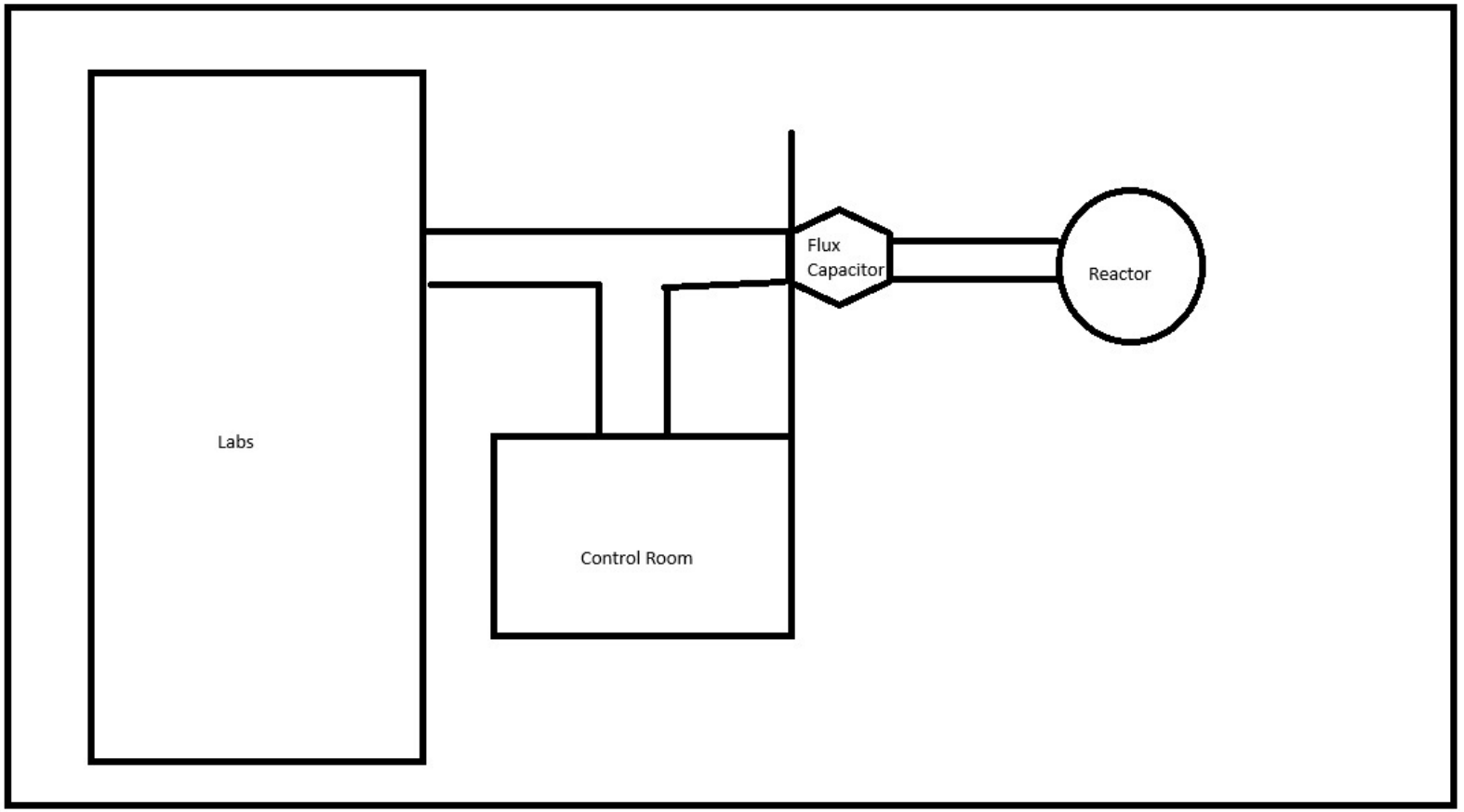
Example 1

Excerpt from the (fictional) Springfield Research Reactor's SAR, Chapter 4:

The Springfield Research Reactor (SRR) is a 6.7 MWth TRIGA II reactor with pulsing capabilities. The reactor core can hold up to 150 fuel elements and is configured to hold 135 elements during normal operation. The SRR is controlled with four B_4C control rods.

Due to the immense pulsing capability ($7.39), SRR has a biological shield thickness of 10 meters (m) of magnetite concrete. The reactor pool is 20 m deep and has a diameter of 7 m. To access the pool, SRR staff must climb to the top of the reactor pool and manipulate the flux capacitor to enter the pool top area.

Example 2



J. Hudson Original

Example 3

Excerpt from the (fictional) Springfield Research Reactor's SAR, Chapter 8:

The reactor control console is powered from the main motor control center (MCC) A. MCC A also provides power to the control rod drive mechanisms, transient rod solenoids, and nuclear instrumentation. On a loss of power, the reactor scrams and the control rods drop into the core via gravity.

The backup battery provides power to the reactor console instrumentation, radiation alarms, emergency diesel firing controls, and access controls. The emergency diesel generator provides power to the primary coolant pump and secondary coolant pump. The emergency diesel also charges the backup battery when in operation. The diesel fuel storage capacity at the SRR will last over 2 hours which is sufficient time to cool the fuel elements.

Submitting to the Docket

When submitting to the docket, please include:

- Transmittal letter
- An unredacted FSAR (clearly marked as such)
- A redacted FSAR (clearly marked as such)
- Affidavit for proprietary withholdings per 10 CFR 2.390 (if appropriate)

Guidance Documents

- SECY-04-0191 Policy issue vote on withholding SUNSI from nuclear power reactors (ML042310663)
- NRC Regulatory Issue Summary 2014-14: Clarification of information Security Requirements for Non-Power Reactor Licensees (ML14084A535)
- NRC Regulatory Issue Summary 2015-17: Review and Submission of Updates to Final Safety Analysis Reports, Emergency Preparedness Documents, and Fire Protection Documents (ML15321A400)
- NRC Regulatory Issue Summary 2005-26: CONTROL OF SENSITIVE UNCLASSIFIED NONSAFEGUARDS (ML080940098)
- INFORMATION RELATED TO NUCLEAR POWER REACTORS (ML051430228)
- 10 CFR 2.390

What if?

- If we don't redact where we should, will the NRC just add additional redactions, or will the NRC make licensee fix?
- If we do redact where we shouldn't, what will the NRC do?
- If we don't redact at all, what will the NRC do?
- If we only send 1 FSAR entirely marked SRI, what will the NRC do?

Questions?