



## Department of Energy

Washington, DC 20585

April 8, 2002

MEMORANDUM FOR KEITH KLEIN, MANAGER, RICHLAND OPERATIONS OFFICE

FROM:

*Jessie Hill Roberson*  
JESSIE HILL ROBERSON  
ASSISTANT SECRETARY FOR  
ENVIRONMENTAL MANAGEMENT

SUBJECT:

Approval of Fluor Hanford Request for Temporary Exemption from  
10 Code of Federal Regulations 830.207(a) Requirement for Plutonium  
Finishing Plant

This letter responds to your November 1, 2001, memorandum forwarding a request for temporary exemption from a provision of Title 10 of the Code of Federal Regulations (CFR), Part 830, Subpart B, "Safety Basis Requirements." According to 10 CFR 830.207(a), a contractor must submit for DOE approval a safety basis that meets the requirements of Subpart B by April 10, 2003. Fluor Hanford, Incorporated (FHI), requested approval to delay its submittal of a safety basis compliant with Subpart B until April 30, 2004. The new date corresponds to the projected time line for completion of the current Plutonium Finishing Plant (PFP) stabilization mission and projected commencement of transition of the current mission to two missions involving deactivation and decommissioning and ongoing storage.

A technical review of the materials submitted with the November 1, 2001, request and the documentation provided subsequently that addressed the PFP Final Safety Analysis Report gaps to the Rule requirements, safe harbor evaluation against DOE-STD-3009, and justification of adequacy has been completed. Based on this review, I find the request for temporary relief from the requirements of 10 CFR 830.207(a) for the current stabilization mission of PFP is justified, provided that the following conditions are enforced:

- The contractor will continue to perform work in accordance with the existing safety basis for the plant.
- Implementation of the current approved Integrated Safety Management System will be continuously monitored to ensure that hazards associated with the actual work are adequately identified and necessary controls are in place to ensure worker safety.
- The existing institutional worker safety programs will be assessed to ensure their adequacy.



**While granting the temporary exemption for the current stabilization mission of PFP, it is imperative that the safety bases compliant with 10 CFR 830, Subpart B Rule for the post-stabilization missions of PFP be developed and approved to ensure that they are in place prior to initiation of the new missions. The current schedule to accomplish this task should be expedited to meet this commitment.**

**The technical review and the temporary exemption decision are attached.**

**2 Attachments**

**cc w/attachments:**

**S. Johnson, EM-5**

**M. Weis, EM-40**

**J. Fiore, EM-43**

**K. Christopher, EH-10**

**R. Black, EH-53**

**Docketing Clerk, EH-10**

## TECHNICAL REVIEW

### Fluor Hanford, Inc., Temporary Exemption Request for Title 10 of the Code of Federal Regulations, Part 830 (10 CFR 830)

Fluor Hanford, Incorporated (FHI), requests temporary exemption from certain requirements of 10 CFR 830, *Nuclear Safety Management*. FHI specifically requests relief for the Plutonium Finishing Plant (PFP) from the requirement in 10 CFR 830.207(a) to provide a safety basis meeting the requirements of 10 CFR 830 by April 10, 2003.

The purpose of this request is to avoid a potentially wasteful expenditure of resources given that: 1) the PFP is at the end of its mission life and is currently operating only to stabilize existing inventory, and 2) the PFP is currently operating to a DOE-approved safety basis that covers the stabilization operations. Although the existing safety basis is not fully compliant with 10 CFR 830, the Richland Operations Office (RL) has concluded that the current safety basis is adequate to support the plant's present stabilization mission. The stabilization process will be completed approximately one year after the April 10, 2003, date specified in 10 CFR 830.207(a), after which the bulk of the facility will begin deactivation. FHI proposes to provide safety bases compliant with 10 CFR 830 at that point for both the shutdown portion of the facility and the portion to remain active, since such a major change in the configuration would require wholesale revision of any safety basis completed by the 10 CFR 830 deadline. FHI has committed to the submission of safety bases compliant with 10 CFR 830 by April 30, 2004.

### Discussion

#### Background

The PFP Final Safety Analysis Report (FSAR) was prepared in 1991 to meet the requirements of the Nuclear Regulatory Commission (NRC) Regulatory Guide 3.39 and approved by DOE in 1995. The FSAR and the associated Operational Safety Requirements were developed prior to the issuance of the current generation of DOE Orders and their associated standards. The FSAR is not fully compliant with all aspects of DOE-STD-3009-94, the safe harbor methodology cited in Appendix A of 10 CFR 830. The noncompliances that exist are justifiable from the perspective that the document was developed to a different standard. However, although different from that expected in a Rule compliant document, the PFP FSAR adequately identifies and evaluates the hazards, includes deterministic safety analyses, and provides suitable controls as demonstrated by analytical confirmation. In 2001, reviewing and approving the latest PFP SAR changes, RL concluded that "RL's review of the Revision 2 to the PFP SAR indicated that the facility can be operated without undue risk to the public, the worker, or the environment."

In reviewing the PFP FSAR gaps to 10 CFR 830, Subpart B and DOE-STD-3009-94, RL and this technical review conclude that the most significant discrepancies deal with format and content requirements, not the lack of safety critical evaluations or information. Therefore, no specific compensatory measures are needed for the deficient conditions identified. The existing controls established and implemented through the current FSAR and the associated Operational Safety

Requirements are considered appropriate and sufficient for the current PFP mission. The hazard controls based on deterministic analyses and successful implementation of the approved Integrated Safety Management System and the supporting safety programs provide adequate safety assurance. The major current ongoing processes have been analyzed in FSAR addenda which have generally DOE-STD-3009 compliant hazards and accident analyses. The lack of specific unmitigated analysis for many of the accidents contained in the current FSAR does not, in the judgment of RL, have any affect on the adequacy of the current control set.

The PFP is at the end of its mission life and is currently operating only to perform material stabilization and repackaging. This activity is scheduled to be complete in May 2004 at which point the bulk of PFP will enter shutdown surveillance and maintenance or deactivation. A small segment of the PFP facility will continue to operate.

### Request

10 CFR 830.207(a) requires submittal of a Rule-compliant safety basis by April 10, 2003. FHI and RL do not believe that preparing a Rule compliant Documented Safety Analysis (DSA) for the entire PFP, as historically operated, is justified because its limited applicability in time and the significant resources that will be required its generation. Accordingly, an exemption request has been submitted.

It is desired to defer preparation and submission of a safety basis to DOE until April 30, 2004, the approximate time at which the facility's mission will change drastically. Two separate DSAs will be prepared for the post-stabilization mission, one for the deactivation or transition surveillance and maintenance, and one for the remaining operational activities. This means that the current PFP activities will operate for another 2.5 years under the existing SAR, approximately 1 year beyond the current limit mandated in 10 CFR 830.

### Analysis

10 CFR 820, *Procedural Rules for DOE Nuclear Activities*, contains criteria for granting an exemption to a DOE Nuclear Safety Requirement. These are that the exemption: a) would be authorized by law; b) would not present an undue risk to public health and safety, the environment, or facility workers; c) would be consistent with the safe operation of a DOE nuclear facility; and d) involves special circumstances, including at least one of the following:

- 1) Application of the requirement in the particular circumstances conflicts with other requirements; or
- 2) Application of the requirement in the particular circumstances would not serve or is not necessary to achieve its underlying purpose, or would result in resource impacts which are not justified by the safety improvements; or
- 3) Application of the requirement would result in a situation significantly different from that contemplated when the requirement was adopted, or that is significantly different from that encountered by others similarly situated; or

- 4) **The exemption would result in benefit to human health and safety that compensate for any detriment that may result from the grant of the exemption; or**
- 5) **Circumstances exist which would justify temporary relief from application of the requirement while taking good faith action to achieve compliance; or**
- 6) **There is present any other material circumstance not considered when the requirement was adopted for which it would be in the public interest to grant an exemption.**

**These criteria are assessed as follows:**

1. **The proposal of an exemption such as this is consistent with the intent of 10 CFR 830 and lawful. The preamble to the final 10 CFR 830 rule specifically states that exemptions can be requested under the provisions of Subpart E of 10 CFR 820.**
2. **The PFP facility will have spent the majority of its operational life without a safety basis prepared to the standards of 10 CFR 830. By April 10, 2003, it will have spent 12 years operating under variants of a safety basis that is adequate to support the mission but not fully compliant with 10 CFR 830. Extension of this time by one year is not considered to present an undue risk. Based upon their review of the current PFP FSAR, RL has concluded that the current safety basis is adequate to control operations for the remainder of the stabilization and repackaging mission. The technical review of the supporting documentation also indicates that no significant safety enhancement will be realized by expending additional resources in upgrading the FSAR for the remaining short duration of PFP's current mission.**
3. **The PFP will continue to operate in accordance with its existing safety basis and all applicable environmental and safety regulations. This is consistent with the general expectations for safe operation of a DOE nuclear facility.**
4. **The situation as described meets multiple definitions of special circumstance.**

**Sub criterion #2 applies when "application of the requirement in the particular circumstances would not serve or is not necessary to achieve its underlying purpose, or would result in resource impacts which are not justified by the safety improvements." Going to an expense in excess of one million dollars to develop a fully compliant DSA for overall facility operations is unwarranted when those operations will cease one year after the completion of said DSA.**

**Sub criterion #5 applies when "circumstances exist which would justify temporary relief from application of the requirement while taking good faith action to achieve compliance." The aforementioned cost-to-benefit ratio clearly represents a circumstance justifying temporary relief, and FHI has already committed to a schedule for ultimate**

compliance. Further, it is not desirable to rush into preparation of the two DSAs until the scope and boundaries of those activities have been fully defined.

10 CFR 820.64 also allows an exemption approval to contain terms and conditions "including, but not limited to, provisions that: 1) limit its duration; 2) require alternative action; 3) require partial compliance; or 4) establish a schedule for full or partial compliance." The exemption will be limited to about one year ending April 30, 2004.

#### Field Recommendation

RL recommends approval of this temporary exemption.

#### Conclusion

The exemption request meets the criteria of 10 CFR 820. Given that the PFP is covered by an existing safety basis, RL has deemed at least adequate, it would be a waste of resources to prepare a new safety basis that would be in effect for a single year. The effort expended on preparing that safety basis would not only delay the completion of the current stabilization mission without adding any additional margin of safety, but also delay preparation of safety bases for the post-stabilization missions. The request for a single year extension is reasonable given the need to define the future state of the facility and to continue to operate to end the PFP present mission.

## **EXEMPTION DECISION**

Pursuant to Title 10 of the Code of Federal Regulations (CFR), part 820.61 (10 CFR 820.61), the Assistant Secretary for Environmental Management (EM-1) is authorized to exercise authority on behalf of the Department of Energy (DOE) with respect to requests for exemptions from nuclear safety rules relating to nuclear safety management.

On October 2, 2001, Fluor Hanford, Incorporated (FHI), filed a request with DOE for temporary exemption from a certain requirement of 10 CFR 830, Subpart B, "Nuclear Safety Management" for the current stabilization mission of the Plutonium Finishing Plant (PFP) at Hanford.

In particular, FHI requested relief from 10 CFR 830.207(a), which requires submittal of a compliant safety basis by April 10, 2003. FHI and the Richland Operations Office do not believe that preparing a full compliant documented safety analysis (DSA) for the entire PFP, as historically operated, by April 10, 2003, is in the best interest of the government or the public. It is desired to defer preparation and submission of a safety basis to DOE until April 30, 2004, the approximate time at which the facility's mission will change drastically. Two separate DSAs will be prepared, one for ongoing plutonium storage and one for the deactivation or transition surveillance and maintenance of the bulk of PFP. This means that PFP activities will operate for another 2.5 years under the existing DSA, or about 1 year beyond the current limit mandated in 10 CFR 830.

The request states that the exemption is not prohibited by law; will not present an undue risk to the public health and safety, the environment, or facility workers; and is consistent with the safe operation of a DOE nuclear facility. It further states that the exemption meets two criteria for special circumstance: 1) application of the requirement in the particular circumstances would not serve or is not necessary to achieve its underlying purpose, or would result in resource impacts which are not justified by the safety improvements; and 2) circumstances exist which would justify temporary relief from application of the requirement while taking good faith action to achieve compliance. I concur with these determinations.

Under the terms set forth in 10 CFR 820.61, I am the Secretarial Officer granted review and approval authority for exemption requests made with respect to 10 CFR 830 for PFP. Based on a review of the supporting documentation, I find the request set forth above has been justified for temporary relief from the requirements of 10 CFR 830.207 (a). It is not DOE's intent to require the development of DSAs whose utility will end within a year of completion, when adequate interim measures exist.

On the basis of the foregoing, I hereby approve FHI's request for temporary exemption from the stated section of 10 CFR 830. While granting the exemption, the following conditions are considered essential:

- Implementation of the current approved Integrated Safety Management System should be continuously monitored to ensure that hazards associated with the actual work are adequately identified and necessary controls are in place to ensure worker safety.

- **The existing institutional worker safety programs should be assessed to ensure their adequacy.**
- **The schedule for development, submittal and approval of a 10 CFR 830, Subpart B compliant safety basis for the post-stabilization mission of PFP should be expedited to ensure that an appropriate safety basis is in place prior to initiation of the new mission.**

4/8/02  
Date

  
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Jessie Hill Roberson  
Assistant Secretary for  
Environmental Management