72-1007

BNG Fuel Solutions
A *BNG America* Company

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October 12, 2005
BFS/NRC 05-015
Docket No. 72-1007
File No. WEP-09

ATTN: Document Control Desk
Director, Spent Fuel Project Office
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: **Change Page for Amendment Request for the VSC-24 Ventilated Storage System Certificate of Compliance**

References: Letter from BNG Fuel Solutions to USNRC, "Amendment Request for the VSC-24 Ventilated Storage System Certificate of Compliance," BFS/NRC 05-014, June 30, 2005.

Dear Sir or Madam:

BNG Fuel Solutions Corporation (BFS) submitted license amendment request LAR 1007-006 (Reference 1) to amend the VSC-24 Ventilated Storage System Certificate of Compliance (CoC No. 1007). Enclosed is an additional change page for LAR 1007-006 that provides an editorial correction to Section 2.3.3.2.

Should you or any member of your staff have any questions, please contact the undersigned at (408) 558-3509.

Sincerely,

Steven E. Sisley
Licensing/Regulatory Compliance Manager

NMSS01

Attachment: Page Insertion Instructions for LAR 1007-006, Revision 1 Change Pages

Enclosure: LAR 1007-006, Revision 1 change pages.

cc: Ms. J. Caverly, NRC NMSS, w/ attachment and enclosure
Mr. R. J. Lewis, NRC NMSS w/ attachment

bcc:

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VSC-24 Ventilated Storage Cask System License Amendment Request

LAR 1007-006, Revision 1

Page Insertion Instructions

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Enclosure

LAR 1007-006, Revision 1
Change Pages

Docket 72-1007
LAR 1007-006, Revision 1

FINAL SAFETY ANALYSIS REPORT
FOR THE
VSC-24 VENTILATED STORAGE CASK SYSTEM

Prepared by:

BNG FUEL SOLUTIONS CORPORATION
CAMPBELL, CALIFORNIA

October 2005

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The thermal performance of the cask system is verified through daily visual inspections of the storage cask inlet and outlet ducts that are performed to detect and prevent any airflow blockages. Such a blockage would lead to a rise in outlet duct air temperature. The daily visual inspections ensure that the temperatures of all cask system components remain within their specified thermal design limits as analyzed in this SAR.

2.3.4 NUCLEAR CRITICALITY SAFETY

The VSC is designed to maintain nuclear criticality safety (subcriticality) under all applicable regulatory conditions. These conditions include normal handling and storage conditions, off-normal handling and component functioning, and hypothetical accident conditions.

The principal criticality design criterion is that k_{eff} remain below 0.95 during normal operation and during accident conditions where optimum moderation is assumed. These values of k_{eff} also include error contingencies and calculational and modeling biases.

The methods of criticality control in the VSC are the use of soluble boron in the fuel pool water and the neutron absorption properties of the fuel and the steel basket of the MSB. The administrative controls ensure that fuel placed in the VSC and the boron concentration meet the requirements described in Chapter 6.

2.3.5 RADIOLOGICAL PROTECTION

2.3.5.1 Access Control

Access to a VSC installation site is controlled by a peripheral fence so as to meet 10 CFR 72 requirements. The details of this access control and the division of the installation site into radiation protection areas will be on a site-specific basis and described in an applicant's 10 CFR 50 license documents or safety review.

2.3.5.2 Shielding

The VSC is designed to provide an average external side surface dose (gamma and neutron) of less than 100 mrem/hr on the sides and 200 mrem/hr on the top. Dose rates of less than 350 mrem/hr at the inlet duct and 100 mrem/hr at the outlet vent are also provided. The actual VSC shielding calculations show dose rates lower than these limits. The design maximum dose rate at the top of the MSB structural lid is 1000 mrem/hr to allow limited personnel access during MSB closure operations. Chapter 5 presents analyses verifying that the VSC loaded with the design basis payload (35 GWd/MTU, 5-year-cooled, PWR fuel) meets these criteria. Supplementary analyses presented in Section 5.5 give the cooling time required, as a function of assembly burnup and initial enrichment, to meet the above criteria and the assembly decay power limit of 1.0 kW.