

OCT 18 2010

LES-10-00225-NRC

Anthony Gody
Director, Fuel Facility Inspection
Region II
245 Peachtree Center Ave, NE
Suite 1200
Atlanta, GA 30303-1257

Louisiana Energy Services, LLC
NRC Docket Number: 70-3103

Subject: Operational Status of Cascades 1 and 2

As recently discussed with you and other NRC personnel, URENCO USA is in the process of addressing quality concerns identified by the Commercial Grade Dedication (CGD) process with cascades authorized to operate (Cascades 1 and 2) and cascades pending future NRC approval to operate (Cascades 3 and forward). As noted, we recently required the shut down of Cascade 2 because of insufficient documentation to demonstrate cascade upper support steel turnbuckle operability. Cascade 2 was the only cascade in UF₆ operation and its shutdown resulted in the facility being placed in a non production status. This shutdown resulted from a UUSA review of weld inspection data on Cascades 1 and 7 for a sample of turnbuckles. The sample was initially selected for review from Cascades 7 and 8 of sufficient size to cover Cascades 2 through 8. This was necessary as the original sample size of turnbuckles from Cascade 1 was not sufficient to cover other cascades, including Cascade 2. Many of the sampled turnbuckles showed a similar weld indication at the threaded rod to straight rod connection. As a result, we further sampled turnbuckles on Cascade 1 that was already shutdown for maintenance. These also showed the same indication which preliminarily appears to be a result of the manufacturing process. We are evaluating 10CFR21 reportability as a result.

The function of these turnbuckles is to provide structural support of the cascade to ensure integrity after a seismic event (safety function IROFS41). Without sufficient evidence through analysis and test that these turnbuckles will perform acceptably under a postulated seismic event, the function of IROFS41 could not be fully demonstrated and a decision was made to shut down Cascade 2 to correct this condition. Cascade 1 was already shutdown for other planned maintenance activities.

The re-review that identified concerns with turnbuckle inspection sample size was part of an extent of condition investigation for ongoing CGD activities. We have performed a detailed re-review on Cascades 1 through 3 and developed a cross reference matrix of critical characteristics to affected parts and their associated testing and surveillance documents. This effort was begun under our Corrective Action Program (CAP) in response to the recent NRC inspection on Cascade 3 and Notice of Violation 70-3103/2010-013-001 issued on August 20, 2010. Weld inclusions on "threaded to straight rod" turnbuckle welds were identified during these inspections that do not meet code. New turnbuckles or repaired turnbuckles without such

indications will be used in Cascades 1 and 2 to fully restore conformance prior to commencing production (i.e., UF₆ feed inlet to the cascades).

For Cascades 3 and forward, UUSA has completed turnbuckle pull tests (with the weld indication) that both demonstrate the operability of Cascade 1 and 2 during their prior operation period and may serve as an alternate method of dedication for future cascades. However, such an approach will not be applied to Cascades 1 and 2 as all turnbuckles installed in these two cascades will be removed and replaced prior to commencing production.

In addition to the turnbuckles, other specific tests or surveillances required to demonstrate full conformance of Cascades 1 and 2 to IROFS41 requirements were identified as part of our CGD re-review. This includes review and resolution of NRC concerns, as applicable to Cascades 1 or 2, identified in the recent Cascade 3 CGD follow-up inspection at our site performed during the week of October 4th, 2010.

In summary, UUSA will complete the following activities prior to commencing Cascades 1 and 2 production (UF₆ feed inlet):

- 1) Replace all turnbuckles with weld indications on Cascade 1 and 2 with either an existing or new design. If the new design is employed, the required Quality Level 1 modification and 70.72 review will be performed prior to production. The new design eliminates the threaded rod to straight rod weld connection and uses one continuous rod.
- 2) Perform all required inspections on Cascades 1 and 2 resulting from the matrix preparation and CGD re-review completed on Cascades 1 through 3. This includes disposition of known NRC issues from recent and prior inspections that may impact Cascade 1 or 2 operability or conformance. Further, this includes an investigation of the prior acceptable welds on turnbuckles in Cascade 1, which are being re-visited through the CAP as a result of the high number of weld indications identified during other turnbuckle inspections.
- 3) Operations will confirm Condition Reports (CRs) from the CAP that are applicable to Cascade 1 or 2 operability were properly closed and dispositioned.
- 4) Operations will confirm CGD activities associated with Cascades 1 and 2 include the appropriate backup documentation and test results to verify acceptance criteria were specified and met.
- 5) Quality Assurance will complete their surveillance of QL-1 lower support steel and their vertical slice review of seven CGD packages for Cascade 1. Any issues identified in these reviews that impact either operability or conformance will be resolved prior to commencing production. This includes any extent of condition actions and their required resolution.

The details and status of these activities are being discussed with the senior construction inspector assigned to UUSA.

Based on re-review efforts to date; matrix preparation for Cascades 1, 2 and 3; and, the in process Operations verifications for Cascades 1 and 2 prior to UF₆ feed inlet, it is expected that future efforts on Cascade 3 and subsequent cascades will not identify issues that could jeopardize the safe operation of Cascades 1 and 2. At no time was the turnbuckle weld issue identified of high safety significance. Insufficient documentation was the basis for shutdown of Cascade 2 with regards to the turnbuckles. Recent pull tests demonstrate the turnbuckles would have performed their safety function. Other issues identified from the CGD re-review of

Cascades 1 through 3 and NRC inspections have not resulted in Cascades 1 or 2 being inoperable.

UUSA is committed to dedicating IROFS41 successfully and consistently. We will complete all necessary actions to fully restore conformance for Cascades 1 and 2 prior to UF₆ feed inlet and keep the NRC informed of our progress. Should there be any questions concerning this submittal, please contact me at 575.394.5215 or Gary Sanford, UUSA Director of Quality and Regulatory Affairs, at 575.394.5407.

Sincerely,

A handwritten signature in black ink, appearing to read "David E. Sexton". The signature is written in a cursive style with a large initial "D" and "S".

David E. Sexton
Chief Nuclear Officer and Vice President of Operations

cc:

Charles Ogle
Director, Construction Inspection
US NRC, Region II
245 Peachtree Center Ave, NE
Suite 1200
Atlanta, GA 30303-1257

James H. Moorman
Deputy Director, Construction Projects
US NRC, Region II
245 Peachtree Center Ave, NE
Suite 1200
Atlanta, GA 30303-1257

Jay L. Henson
Chief, Fuel Facility Branch 2
US NRC, Region II
245 Peachtree Center Ave, NE
Suite 1200
Atlanta, GA 30303-1257

Tyrone D. Naquin, Project Manager
Two White Flint
Mail Stop EBB2-C40M
11545 Rockville Pike
Rockville, MD 20852-2738

David J. Hartland
US NRC, Region II
245 Peachtree Center Ave, NE
Suite 1200
Atlanta, GA 30303-1257

Eugene W. Cobey
US NRC, Region II
245 Peachtree Center Ave, NE
Suite 1200
Atlanta, GA 30303-1257