CCNPP3COLA PEmails

From: Perdomo, Federico R [Federico.Perdomo@unistarnuclear.com]
Sent: Wednesday, December 09, 2009 5:50 PM
To: Quinn, Laura
Cc: Lutchenkov, Dimitri; Stevenson, Michael; Frailer, Melanie D; Yox, Michael J; Versyp, Francois; Fleming, Carey W.
Subject: UN#09-510 - CCNPP Unit 3 LLRW disposal plans
Attachments: UN#09-510 - CCNPP Unit 3 LLRW Disposal Plans.pdf

Laura,

Attached please find UniStar letter UN#09-510 which provides CCNPP Unit 3 disposal plans. The hard copies of this letter will be distributed as normal. This E-mail copy will help in any telephone discussions that we may have near-term.

Thank You

Federico Perdomo

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Email Number: 1100

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Subject: UN#09-510 - CCNPP Unit 3 LLRW disposal plans
Sent Date: 12/9/2009 5:49:47 PM
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From: Perdomo, Federico R

Created By: Federico.Perdomo@unistarnuclear.com

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"Quinn, Laura" <Laura.Quinn@nrc.gov>
Tracking Status: None

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Recipients Received:

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UniStar
NUCLEAR ENERGY

10 CFR 50.4
10 CFR 52.79

December 9, 2009

UN#09-510

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: UniStar Nuclear Energy, NRC Docket No. 52-016
Calvert Cliffs Nuclear Power Plant, Unit 3
Response to NRC Telecom Question Regarding
CCNPP Unit 3 Low Level Radioactive Waste Disposal Plans

The purpose of this letter is to provide a response to an NRC Staff question regarding the Calvert Cliffs Nuclear Power Plant, Unit 3 Low Level Radioactive Waste (LLRW) disposal plans.

In a teleconference with NRC Staff on October 27, 2009, it was pointed out that the Atomic Safety and Licensing Board (ASLB) Contention No. 7, having to do with LLRW disposal plans, had been admitted for further consideration. UNE was asked if it intended to provide a response regarding its LLRW disposal plans.

The enclosure to this letter provides our response to this question and includes revised COLA content. A Licensing Basis Document Change Request has been initiated to incorporate these changes into a future revision to the COLA.

This response does not include any new regulatory commitments and does not contain any sensitive or proprietary information.

If there are any questions regarding this transmittal, please contact me at (410) 470-4205, or Mr. Dimitri Lutchenkov at (410) 470-5524.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 9, 2009

Greg Gibson

Enclosure: Response to NRC Telecom Question Regarding CCNPP Unit 3 Low Level Radioactive Waste Disposal Plans

cc: Surinder Arora, NRC Project Manager, U.S. EPR Projects Branch
Laura Quinn, NRC Environmental Project Manager, U.S. EPR COL Application
Getachew Tesfaye, NRC Project Manager, U.S. EPR DC Application (w/o enclosure)
Loren Plisco, Deputy Regional Administrator, NRC Region II (w/o enclosure)
Silas Kennedy, U.S. NRC Resident Inspector, CCNPP, Units 1 and 2
U.S. NRC Region I Office

Enclosure

Response to NRC Telecom Question Regarding
CCNPP Unit 3 Low Level Radioactive Waste Disposal Plans

Question

Low Level Waste Disposal Plans

In a teleconference with NRC Staff on October 27, 2009, a question was raised as to whether UniStar Nuclear Energy (UNE) intended to provide a response regarding its low-level radioactive waste (LLRW) disposal plans. The NRC Staff pointed out that Atomic Safety and Licensing Board Contention No. 7 having to do with LLRW disposal plans (ADAMS document No. ML091080044) had been admitted for further consideration and asked if UNE intended to provide a response on the subject LLRW question.

Response

CCNPP Unit 3 has capacity for storing packaged LLRW onsite until it is shipped offsite to a licensed radioactive waste processing facility or a burial site. Onsite processing of the waste will be performed in accordance with the Process Control Program (PCP) identified in FSAR Section 11.4.3 of the CCNPP Unit 3 COLA. The development of this PCP is a Condition of License listed in FSAR Table 13.4-1. The PCP assures that the final solid waste disposal product from CCNPP Unit 3 meets applicable Federal, State, and Disposal Site requirements for low-level radioactive waste classification and characterization, waste transfers and shipping manifests, shipping regulations, and waste acceptance criteria of authorized disposal facilities.

As of July 1, 2008, the Barnwell LLRW disposal facility in Barnwell, South Carolina no longer accepts Class B and C waste from sources in states outside of the Atlantic Compact. The only other operating disposal site in Richland, Washington, does not currently accept Class B and C wastes from outside the Northwest or Rocky Mountain LLRW Compacts. Maryland is affiliated with the Appalachian Compact.

CCNPP Unit 3 expects to enter into an agreement prior to initial criticality with an NRC-licensed facility that will process or otherwise accept Class B and C LLRW. For example, a site in Andrews County, Texas was recently licensed to accept Class B and C waste. For now, however, the site will only accept waste from Texas and Vermont.

In the event that no offsite disposal facility is available to accept Class B and C waste from CCNPP Unit 3 when it commences operation, additional waste minimization measures could be implemented to reduce or eliminate the generation of Class B and C waste. These measures include: reducing the service run length for resin beds; short loading media volumes in ion exchange vessels; and other techniques discussed in the EPRI Class B/C Waste Reduction Guide (Nov. 2007) and EPRI Operational Strategies to Reduce Class B/C Wastes (April 2007). These measures would extend the capacity of the Solid Waste Storage System to store Class B and C waste to over ten years. This would provide additional time for offsite disposal capability to be developed or additional onsite capacity to be added. Continued storage of Class B and C waste in the Solid Waste Storage System would be in accordance with procedures that maintain occupational exposures within permissible limits and result in no additional environmental impacts.

If additional storage capacity for Class B and C were necessary, CCNPP3 could elect to construct a new temporary storage facility. The facility would meet applicable NRC guidance, including Appendix 11.4-A of the Standard Review Plan, "Design Guidance for Temporary

Storage of Low-Level Waste." Such a facility would be located in an appropriate onsite location. The environmental impacts of constructing such a facility would be minimal and would be addressed at the time the facility was announced. The operation of a storage facility meeting the standards in Appendix 11.4-A would provide appropriate protection against releases, maintain exposures to workers and the public below applicable limits, and result in no significant environmental impact.

In lieu of onsite storage, CCNPP3 could enter into a commercial agreement with a third-party contractor to process, store, own, and ultimately dispose of low-level waste generated as a result of CCNPP3 operations. Activities associated with the transportation, processing, and ultimate disposal of low level waste by the third-party contractor would necessarily comply with applicable laws and regulations in order to assure public health and safety and protection of the environment. In particular, the third-party contractor would conduct its operations consistent with applicable Agreement State or NRC regulations (e.g., 10 CFR Part 20), which assure that the radiological impacts from these activities would be acceptable. Environmental impacts resulting from management of low-level wastes are expected to be bounded by the NRC findings in 10 CFR 51.51(b) (Table S-3). Table S-3 assumes that solid, low-level waste from reactors will be disposed of through shallow land burial, and concludes that this kind of disposal will not result in the release of any significant effluent to the environment.

COLA Impact

ER Section 3.5.4.5 of the CCNPP Unit 3 COLA will be revised as follows in a future COLA revision:

3.5.4.5 SOLID RELEASE TO THE ENVIRONMENT

Solid wastes will be shipped from the site for burial at a NRC licensed burial site <u>or to a licensed radioactive waste processing facility</u>. The containers used for solid waste shipments will meet the requirements of 49 CFR Parts 170 through 189 (Department of Transportation Radioactivity Material Regulations) (CFR, 2007e), and 10 CFR Part 71 (Packaging of Radioactive Materials for Transport) (CFR, 2007f). Table 3.5-10 summarizes the annual total solid radioactive waste generated at CCNPP Unit 3.

<u>As of July 1, 2008, the Barnwell LLRW disposal facility in Barnwell, South Carolina no longer accepts Class B and C waste from sources in states outside of the Atlantic Compact. The only other operating disposal site in Richland, Washington, does not currently accept Class B and C wastes from outside the Northwest or Rocky Mountain LLRW Compacts. Maryland is affiliated with the Appalachian Compact.</u>

<u>CCNPP Unit 3 expects to enter into an agreement prior to initial criticality with an NRC-licensed facility that will process or otherwise accept Class B and C LLRW. For example, a site in Andrews County, Texas was recently licensed to accept Class B and C waste. For now, however, the site will only accept waste from Texas and Vermont.</u>

<u>In the event that no offsite disposal facility is available to accept Class B and C waste from CCNPP Unit 3 when it commences operation, additional waste minimization measures could be implemented to reduce or eliminate the generation of Class B and C waste. These measures include: reducing the service run length for resin beds; short loading media volumes in ion</u>

exchange vessels; and other techniques discussed in the EPRI Class B/C Waste Reduction Guide (Nov. 2007) and EPRI Operational Strategies to Reduce Class B/C Wastes (April 2007). These measures would extend the capacity of the Solid Waste Storage System to store Class B and C waste to over ten years. This would provide additional time for offsite disposal capability to be developed or additional onsite capacity to be added. Continued storage of Class B and C waste in the Solid Waste Storage System would be in accordance with procedures that maintain occupational exposures within permissible limits and result in no additional environmental impacts.

If additional storage capacity for Class B and C were necessary, CCNPP3 could elect to construct a new temporary storage facility. The facility would meet applicable NRC guidance, including Appendix 11.4-A of the Standard Review Plan, "Design Guidance for Temporary Storage of Low-Level Waste." Such a facility would be located in an appropriate onsite location. The environmental impacts of constructing such a facility would be minimal and would be addressed at the time the facility was announced. The operation of a storage facility meeting the standards in Appendix 11.4-A would provide appropriate protection against releases, maintain exposures to workers and the public below applicable limits, and result in no significant environmental impact.

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