



Tennessee Valley Authority, 1101 Market Street, LP 5A, Chattanooga, Tennessee 37402-2801

July 25, 2008

10 CFR 52.80

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

In the Matter of )  
Tennessee Valley Authority )

Docket Numbers 52-014 and 52-015

BELLEFONTE COMBINED LICENSE APPLICATION – RESPONSE TO ENVIRONMENTAL REPORT REQUEST FOR ADDITIONAL INFORMATION – THERMOPHILIC MICROORGANISMS

Reference: Letter from Mallecia Hood (NRC) to Ashok S. Bhatnaker (TVA), Request for Additional Information Regarding the Environmental Review of the Combined License Application for Bellefonte Nuclear Plant, Units 3 and 4, dated July 11, 2008 [ML081840493].

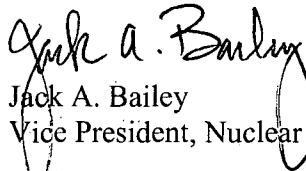
This letter provides the Tennessee Valley Authority's (TVA) response to one of the Nuclear Regulatory Commission's (NRC) request for additional information (RAI) items included in the reference letter.

The enclosure provides the response to the thermophilic microorganisms request, as well as identifying any associated changes that will be made in a future revision of the BLN application.

If you should have any questions, please contact Thomas Spink at 1101 Market Street, LP5A, Chattanooga, Tennessee 37402-2801, by telephone at (423) 751-7062, or via email at [tespink@tva.gov](mailto:tespink@tva.gov).

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

Executed on this 25<sup>th</sup> day of July, 2008.

  
Jack A. Bailey  
Vice President, Nuclear Generation Development

Enclosure:

DOSS  
NRO

Document Control Desk

Page 2

July 25, 2008

Response to Environmental Report Request for Additional Information – Thermophilic  
Microorganisms

cc (Enclosure):

M. A. Hood, NRC/HQ

cc: (w/o Enclosure)

B. Anderson, NRC/HQ  
M. M. Comar, NRC/HQ  
E. Cummins, Westinghouse  
S. P. Frantz, Morgan Lewis  
M. W. Gettler, FP&L  
R. C. Grumbir, NuStart  
P. S. Hastings, NuStart  
P. Hinnenkamp, Entergy  
B. Hughes, NRC/HQ  
R. G. Joshi, NRC/HQ  
R. H. Kitchen, PGN  
M. C. Kray, NuStart  
D. Lindgren, Westinghouse  
G. D. Miller, PG&N  
A. M. Monroe, SCE&G  
M. C. Nolan, Westinghouse  
C. R. Pierce, SNC  
R. Register, DOE/PM  
L. Reyes, NRC/RII  
J. M. Sebrosky, NRC/HQ  
T. Simms, NRC/HQ  
N. T. Simms, Westinghouse  
G. A. Zinke, NuStart

ENCLOSURE  
RESPONSE TO ENVIRONMENTAL REPORT REQUESTS FOR ADDITIONAL INFORMATION  
THERMOPHILIC MICROORGANISMS

**RESPONSE TO ENVIRONMENTAL REPORT  
REQUESTS FOR ADDITIONAL  
INFORMATION**

**THERMOPHILIC MICROORGANISMS**

TVA Letter Dated: July 25, 2008

Responses to Environmental Report Information Needs – Thermophilic Microorganisms

This enclosure provides the status of the request for additional information (RAI) related to Thermophilic Microorganisms and provides the BLN responses to this request.

Status of Requests for Additional Information Related to Thermophilic Microorganisms

<u>RAI Number</u>	<u>Date of TVA Response</u>
• 5.3.4.1-1	This letter – see following pages

TVA Letter Dated: July 25, 2008

Responses to Environmental Report Information Needs – Thermophilic Microorganisms

---

**NRC Review of the BLN Environmental Report****NRC Environmental Category: THERMOPHILIC MICROORGANISMS****NRC RAI NUMBER: 5.3.4.1-1**

What protection will be provided to workers during activities within the cooling towers to minimize exposure to thermophilic microorganisms?

**BLN RESPONSE:**

Earlier this year, TVA investigated personal protective equipment (PPE) recommendations to minimize exposure to thermophilic microorganisms, specifically *Legionella pneumophila* (*Legionella*), in support of cooling tower work at Watts Bar Nuclear Plant (WBN). TVA expects that protective gear similar to that recommended at WBN will be required of workers during activities within the BLN cooling towers, at the direction of the BLN construction safety manager. The specific PPE recommendations/requirements are subject to change, based upon sampling results, success of cooling tower basin disinfection efforts, future developments in PPE technologies, Occupational Safety and Health Administration (OSHA) requirements at the time of the work, and other potential mitigating factors.

To prevent exposure during cleaning and maintenance, the following PPE were recommended for the WBN cooling tower work: a Tyvek-type suit with a hood, protective gloves, and a properly fitted respirator with a high-efficiency particulate (HEPA) filter or a filter effective at removing one-micron particles. Similar PPE recommendations are expected to be required for the BLN cooling tower work should sampling indicate an aerosol that could contain the bacterium.

TVA's PPE requirements will meet applicable OSHA requirements and are expected to consider the appropriate OSHA recommendations. OSHA recommends respiratory protection for work where a person may breathe water aerosol. OSHA states that N95 disposable respirators have been specified for pathogens such as tuberculosis and severe acute respiratory syndrome (SARS). Based on this recommendation, these types of respirators would also be effective for low level *legionella* exposure. If the water mist is such that it clogs filtering respirators in less than the working time and changing out respirators / filters is not feasible, some form of self contained breathing system may have to be used. One other type of respiratory protection that may be considered for this application is a belt mounted powered air purifying respirator (PAPR), where the filter and pump are kept outside the Tyvek-type suit. This set-up would give the necessary respiratory protection and potentially eliminate the need to use a self-contained breathing system.

This response is PLANT-SPECIFIC.

**ASSOCIATED BLN COL APPLICATION TEXT CHANGES:**

None.

**ATTACHMENTS:**

None.