

June 30, 2006

Mr. Karl W. Singer
Chief Nuclear Officer and
Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 1 — REQUEST FOR ADDITIONAL
INFORMATION RE: EMERGENCY CORE COOLING SYSTEM (ECCS)
EVALUATION MODEL CHANGES (TAC No. MC8248)

Dear Mr. Singer:

By Letter dated August 16, 2005, the Tennessee Valley Authority notified the Nuclear Regulatory Commission (NRC) of a change in the Watts Bar Nuclear Plant, Unit 1, ECCS evaluation models for peak cladding temperature (PCT) in accordance with Title 10 of the *Code of Federal Regulations*, Section 50.46 related to a temporary change of more than 50 degrees Fahrenheit in calculated PCT.

The NRC staff has identified the enclosed Request for Additional Information which will be necessary in order to complete our review. Based on discussions with your staff, we understand that you expect to respond to this request by approximately August 18, 2006.

Sincerely,

/RA/

Douglas V. Pickett, Senior Project Manager
Plant Licencing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-390

Enclosure: As stated

cc w/enclosure: See next page

June 30, 2006

Mr. Karl W. Singer
Chief Nuclear Officer and
Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 1 — REQUEST FOR ADDITIONAL
INFORMATION RE: EMERGENCY CORE COOLING SYSTEM (ECCS)
EVALUATION MODEL CHANGES (TAC No. MC8248)

Dear Mr. Singer:

By Letter dated August 16, 2005, the Tennessee Valley Authority notified the Nuclear Regulatory Commission (NRC) of a change in the Watts Bar Nuclear Plant, Unit 1, ECCS evaluation models for peak cladding temperature (PCT) in accordance with Title 10 of the *Code of Federal Regulations*, Section 50.46 related to a temporary change of more than 50 degrees Fahrenheit in calculated PCT.

The NRC staff has identified the enclosed Request for Additional Information which will be necessary in order to complete our review. Based on discussions with your staff, we understand that you expect to respond to this request by approximately August 18, 2006.

Sincerely,

/RA/

Douglas V. Pickett, Senior Project Manager
Plant Licencing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-390

Enclosure: As stated

cc w/enclosure: See next page

Distribution

PUBLIC	LPL2-2 r/f	RidsNRRDorLpl2-2	RidsNrrPMDPickett
RidsNrrLACSola	RidsOgcRp	RidsAcrsAcnwMailCenter	RidsRgn2MailCenter
S. Sun, NRR	RidsNrrDssSpwb		

ADAMS ACCESSION NO. ML061730232

NRR-088

OFFICE	LPL2-2	LPL2-2/PM	LPL2-2/LA	SPWB/BC	LPL2-2/BC
NAME	SCrane	DPickett	RSola	HYi-Hsiung for JNakoski	MMarshall
DATE	06/26/06	06/26/06	06/26/06	06/30/06	06/30/06

OFFICIAL RECORD COPY

Mr. Karl W. Singer
Tennessee Valley Authority

WATTS BAR NUCLEAR PLANT

cc:

Mr. Ashok S. Bhatnagar, Senior Vice President
Nuclear Operations
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Paul L. Pace, Manager
Licensing and Industry Affairs
Watts Bar Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, TN 37381

Mr. Larry S. Bryant, Vice President
Nuclear Engineering & Technical Services
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Jay Laughlin, Plant Manager
Watts Bar Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, TN 37381

Mr. Robert J. Beecken, Vice President
Nuclear Support
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Senior Resident Inspector
Watts Bar Nuclear Plant
U.S. Nuclear Regulatory Commission
1260 Nuclear Plant Road
Spring City, TN 37381

Mr. Michael D. Skaggs
Site Vice President
Watts Bar Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, TN 37381

County Executive
375 Church Street
Suite 215
Dayton, TN 37321

General Counsel
Tennessee Valley Authority
ET 11A
400 West Summit Hill Drive
Knoxville, TN 37902

County Mayor
P. O. Box 156
Decatur, TN 37322

Mr. John C. Fornicola, Manager
Nuclear Assurance and Licensing
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Lawrence E. Nanney, Director
Division of Radiological Health
Dept. of Environment & Conservation
Third Floor, L and C Annex
401 Church Street
Nashville, TN 37243-1532

Mr. Glenn W. Morris, Manager
Corporate Nuclear Licensing
and Industry Affairs
Tennessee Valley Authority
4X Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Ms. Ann P. Harris
341 Swing Loop Road
Rockwood, Tennessee 37854

REQUEST FOR ADDITIONAL INFORMATION

WATTS BAR NUCLEAR PLANT UNIT 1

EMERGENCY CORE COOLING SYSTEM (ECCS) EVALUATION MODEL CHANGES

DOCKET NO. 50-390

By letter dated August 16, 2005, the Tennessee Valley Authority (licensee), notified the Nuclear Regulatory Commission (NRC) staff of a change in the Watts Bar Nuclear Plant, Unit 1, ECCS evaluation models for peak cladding temperature (PCT) in accordance with Title 10 of the *Code of Federal Regulations*, Section 50.46 related to a temporary change of more than 50 degrees Fahrenheit (EF) in calculated PCT. The letter indicated that leakage in the piping relief valves could result in a loss of up to 30 gallons per minute (gpm) in Safety Injection (SI) flow to the pressurizer relief tank when the SI system was in operation. The licensee proposed PCT penalties for the small-break and large-break loss-of-coolant-accident (LOCA) analysis of 120 EF and 0 EF, respectively, to account for the effect of a reduction of 30 gpm in SI flow.

Please discuss how the PCT penalties were determined to account for the reduction of 30 gpm in SI flow. The discussion should include a description of the methodologies or computer codes used for the PCT penalty determination and the values of key plant parameters that are different from those used in the analysis of record for the LOCA analysis. Also, confirm that the methodologies or computer codes used for the PCT penalty determination were previously approved by the NRC, or justify the adequacy of the methodologies or computer codes used if they were not previously approved by the NRC.