**PPPL Calculation Form**

Calculation # NSTX-Calc-11-01-00 Revision # 0 WP #, if any

 (ENG-032)

Purpose of Calculation: (Define why the calculation is being performed.)

Perform Global Thermal Analysis of CS Casing and Tiles

References (List any source of design information including computer program titles and revision levels.)

See attached report

Assumptions (Identify all assumptions made as part of this calculation.)

See attached report

Calculation (Calculation is either documented here or attached)

See attached Report

Conclusion (Specify whether or not the purpose of the calculation was accomplished.)

See attached report

Cognizant Engineer’s printed name, signature, and date

Art Brooks, 02/21/11

**I have reviewed this calculation and, to my professional satisfaction, it is properly performed and correct.**

Checker’s printed name, signature, and date

1. Assure that inputs were correctly selected and incorporated into the design.

2. Calculation considers, as appropriate:

 - Performance Requirements (capacity, rating, system output)

 - Design Conditions (pressure, temperature, voltage, etc.)

 - Load Conditions (seismic, wind, thermal, dynamic)

 - Environmental Conditions (radiation zone, hazardous material, etc.)

 - Material Requirements

 - Structural Requirements (foundations, pipe supports, etc.)

 - Hydraulic Requirements (NPSH, pressure drops, etc.)

 - Chemistry Requirements

 - Electrical Requirements (power source, volts, raceway, insulation)

 - Equipment Reliability (FMEA)

 - Failure Effects on Surrounding Equipment

3. Assumptions necessary to perform the design activity are adequately described and reasonable.

4. An appropriate calculation method was used.

5. The results are reasonable compared to the inputs.

**NOTE: BY SIGNING CALCULATION, CHECKER ACKNOWLEDGES THAT THE CALCULATION HAS BEEN APPROPRIATELY CHECKED AND THAT THE APPLICABLE ITEMS LISTED ABOVE HAVE BEEN INCLUDED AS PART OF THE CHECK.**