



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

May 26, 2017

Mr. Daniel G. Stoddard
Senior Vice President and
Chief Nuclear Officer
Innsbrook Technical Center
5000 Dominion Blvd.
Glen Allen, VA 23060-6711

**SUBJECT: SURRY POWER STATION – NOTIFICATION OF INSPECTION AND REQUEST
FOR INFORMATION**

Dear Mr. Stoddard:

The NRC will perform the baseline heat sink (HS) inspection at the Surry Power Station from July 10 – 14, 2017. Experience has shown that this inspection is resource intensive both for the NRC inspectors and your staff. In order to minimize the impact to your on-site resources and to ensure a productive inspection, we have enclosed a request for documents needed for this inspection. These documents have been divided into two groups. The first group (Section A of the enclosure) identifies information to be provided prior to the inspection to ensure that the inspectors are adequately prepared. The second group (Section B of the enclosure) identifies the information the inspectors will need upon arrival at the site. It is important that all of these documents are up to date and complete in order to minimize the number of additional documents requested during the preparation and/or the onsite portions of the inspection.

We discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection at the present time will be Mr. Barry Garber of your organization. Our inspection dates are subject to change based on your updated schedule of activities. If there are any questions about this inspection or the material requested, please contact the lead inspector, Al Butcavage, at (404) 997-4640 (Alexander.Butcavage@nrc.gov).

This letter and its enclosure will be made available for public inspection and copying at <https://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Shakur A. Walker, Chief
Engineering Branch 3
Division of Reactor Safety

Docket Nos. 50-280, 50-281
License Nos.: DRP-32, DRP 37

Enclosure:
Pre-Inspection Document Request

cc: Distribution via Listserv

SUBJECT: SURRY POWER STATION – NOTIFICATION OF INSPECTION AND REQUEST FOR INFORMATION

Distribution:

A. Butcavage, DRS

S. Walker, DRS

PUBLICLY AVAILABLE
 NON-PUBLICLY AVAILABLE
 SENSITIVE
 NON-SENSITIVE
 ADAMS: Yes
 ACCESSION NUMBER: _____
 SUNSI REVIEW COMPLETE
 FORM 665 ATTACHED

OFFICE	RII:DRS	RII:DRS					
SIGNATURE	AJB1	SAW4					
NAME	ABUTCAVAGE	SWALKER					
DATE	5/24/2017	5/26/2017	5/ /2017	5/ /2017	5/ /2017	5/ /2017	5/ /2017
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY
 DOCUMENT NAME: S:\DRS NEW\ENG BRANCH 3\INSPECTIONS\WORKING DOCUMENTS\RFIS\HEAT SINK REQUEST FOR INFORMATION LETTERS\2017\SURRY HS RFI 2017003 - AJB.DOCX

HEAT SINK PERFORMANCE DOCUMENT REQUEST

Inspection Dates: July 10 – July 14, 2017

Inspection Procedures: IP 71111.17, "Heat Sink Performance"

Inspectors: AI Butcavage, Reactor Inspector (Lead Inspector)

A. Information Requested for the In-Office Preparation Week

The following information should be sent to the Region II office in hard copy or electronic format (preferred), in care of AI Butcavage by June 26, 2017, to facilitate the selection of specific items that will be reviewed during the onsite inspection week. The inspector will select specific items from the information requested below and then request from your staff additional documents needed during the onsite inspection week (Section B of this enclosure). We ask that the specific items selected from the lists be available and ready for review on the first day of inspection. *Please provide requested documentation electronically if possible. If requested documents are large and only hard copy formats are available, please inform the inspector, and provide subject documentation during the first day of the onsite inspection. If you have any questions regarding this information request, please call the inspector as soon as possible.

A.1 Heat Exchangers and Service Water Equipment

- a) List of heat exchangers (HXs) or equipment cooled by service water (SW) directly or indirectly
 - Include the risk ranking from the site specific risk assessment for each listed HX
 - Detail whether any cleaning or inspection activities are planned during the proposed onsite inspection period for any of the listed HXs
 - For HXs directly cooled by SW, provide the testing, inspection, maintenance, and monitoring of biotic fouling and macrofouling program documents
- b) Detail of the HX performance inspection methods for HXs that are inspected/cleaned
- c) Response to Generic Letter 89-13 including any regulatory commitments made
- d) Design Basis documents associated with the SW system
- e) Design Basis documents associated with the Ultimate Heat Sink (UHS)
- f) SW system flow diagrams
- g) Recent Health Reports associated with the SW System and systems that are cooled by SW
- h) List of SW system related corrective action documents (with a brief description) which have received a Root Cause Analysis or an elevated severity level in the last three years

Enclosure

- i) Recent Operating Experience Events (2014-2017)
- j) List of applicable Codes and Industry Guidelines
- k) List of findings in the heat sink/heat exchanger performance area for the last 3 years
- l) List of redundant or infrequently used HXs
- m) Chemistry Program for safety-related HXs.
- n) Detail whether the UHS is above ground encapsulated by embankments, weirs or excavated side slopes; underwater weir or excavation; or forced draft cooling tower or spray pond
- o) Provide a list of buried or inaccessible piping and the piping test program, inspection or monitoring program
- p) List of safety-related and non-safety related valve interfaces
- q) Most recent self-assessment reports performed on the UHS and SW systems

B. Information to be provided on-site to the inspector at the entrance meeting (July 10, 2017):

B.1 Heat Exchangers and Service Water Equipment

The inspector will select two to four heat exchangers and/or heat sink samples as required by the inspection procedure during the in-office preparation. The following items will be requested when the selections are made:

- a) Updated list of System Engineers
- b) List of any through-wall leaks including completed or planned corrective actions and structural evaluations
- c) Provide a copy of the corrective actions and supporting documentation
- d) For the HXs that have Visual and/or Eddy Current Testing performed, provide a copy of the written procedures used, examination records, examiner qualification records, and associated corrective action documents
- e) Heat transfer calculations
- f) Evaluations for the potential of water hammer
- g) Documentation for controls and operational limits for excessive flow induced vibrations
- h) Periodic flow test results at/or near maximum design flow

- i) For an UHS that is encapsulated by embankments, weirs of excavated side slopes provide: (1) third party dam inspection results, and (2) documentation showing that there is sufficient reservoir capacity
- j) For an UHS that is an underwater weir or excavation provide documentation showing:
 - Periodic monitoring and trending of sediment build-up
 - Sufficient reservoir capacity
 - Considerations for adjacent non-seismic and/or non-safety related structures of possible degradation or blocking of safety-related flow paths due to severe weather or seismic events
 - Performance monitoring of heat transfer capabilities
 - Performance monitoring of UHS structural integrity
 - SW flow balance test results

Inspector Contact Information:

AI Butcavage

Reactor Inspector

404-997-4640

Alexander.Butcavage@nrc.gov

Mailing Address:

US NRC Region 2

Attn: AI Butcavage

Marquis One Tower

245 Peachtree Center Avenue, NE

Suite 1200

Atlanta, GA 30303