UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 E. LAMAR BLVD
ARLINGTON, TX 76011-4511

February 24, 2017

Mr. Michael R. Chisum
Site Vice President
Entergy Operations, Inc.
17265 River Road
Killona, LA 70057-0751

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - NOTIFICATION OF NRC TRIENNIAL HEAT SINK PERFORMANCE INSPECTION (05000382/2017001) AND REQUEST FOR INFORMATION

Dear Mr. Chisum:

The purpose of this letter is to notify you that U.S. Nuclear Regulatory Commission (NRC) staff will conduct a triennial heat sink performance inspection at your Waterford Steam Electric Station, Unit 3, from March 20–24, 2017. The inspection will consist of one reactor inspector from the NRC's Region IV office for one week. The inspection will be conducted in accordance with NRC Inspection Procedure 71111.07, "Heat Sink Performance."

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. Please note that the documents are requested to be provided by March 13, 2017. We request that during the on-site inspection week you ensure that copies of analyses, evaluations, or documentation regarding the implementation and maintenance of your heat exchanger program are available. Of specific interest are those documents that establish that your heat exchanger program satisfies NRC regulatory requirements and conforms to applicable NRC guidance. Also, appropriate personnel knowledgeable of safety-related heat exchangers should be available to support the inspector at the site during the inspection.

We have discussed the schedule for this inspection activity with your staff and understand that our regulatory contact for this inspection will be Ms. M. Zamber of your licensing organization. If there are any questions about this inspection or the material requested, please contact the inspector, Chris Smith, by telephone at 817-200-1095 or by e-mail at Chris.Smith@nrc.gov.

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control number 3150-0011. The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Thomas R. Farnholtz, Chief
Engineering Branch 1
Division of Reactor Safety

Docket No. 50-382
License No. NPF-38

Enclosure:
Triennial Heat Sink Performance Inspection
Request for Information

WATERFORD STEAM ELECTRIC STATION, UNIT 3 - NOTIFICATION OF NRC TRIENNIAL HEAT SINK PERFORMANCE INSPECTION (05000382/2017001) AND REQUEST FOR INFORMATION – FEBRUARY 24, 2017

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Electronic Distribution for Waterford Steam Electric Station

ADAMS ACCESSION NUMBER: ML17055A670

☒ SUNSI Review: By: TFarnholtz	ADAMS: ☒ Yes ☐ No	☐ Non-Publicly Available ☒ Publicly Available	☒ Non-Sensitive ☐ Sensitive	Keyword: NRC-002

OFFICE	RI:EB1	C:EB1				
NAME	CSmith	TFarnholtz				
SIGNATURE	Email	/RA/				
DATE	2/24/17	2/24/17				

OFFICIAL RECORD COPY

Request for Information
Triennial Heat Sink Performance Inspection
Waterford Steam Electric Station, Unit 3

Inspection Report:	05000382/2017001
Inspection Dates:	March 20–24, 2017
Inspection Procedure:	IP 71111.07, Triennial Heat Sink Performance
Inspectors:	Chris Smith, Reactor Inspector Chad Stott, Reactor Inspector

Information Requested for the In-Office Preparation Week

The following information should be sent to the Region IV office in hard copy or electronic format (Certrec IMS preferred), to the attention of Chris Smith, by March 13, 2017. The inspector will select specific items from the information requested below and then request from your staff additional documents needed during the on-site inspection week. Also, we request that you categorize the documents in your response with the numbered list below. 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 on-site inspection. If you have any questions regarding this information request, please call the lead inspector as soon as possible.

The following heat exchangers/heat sinks have been selected for inspection:

- Auxiliary Component Cooling Water (ACCW) System Wet Cooling Towers, Train B
- Component Cooling Water (CCW) System Dry Cooling Towers, Train B
- Containment Cooling System (CCS), Train A; Fan Coolers 3A-SA and 3C-SA

For all Generic Letter 89-13 exchangers:

1. List of corrective action program documents (with a short description) associated with Generic Letter 89-13 heat exchangers, heat sinks, silting, corrosion, fouling, heat exchanger cavitation, or heat exchanger testing, in the previous three years

2. System health report(s) and maintenance rule system notebooks for all the Generic Letter 89-13 heat exchangers

3. Copy of any self-assessments done on any Generic Letter 89-13 heat exchangers in the previous three years

4. Copies of any procedures developed to implement the recommendations of Generic Letter 89-13, e.g., the Generic Letter 89-13 Heat Exchanger Program description

5. Copies of any commitments to the Generic Letter 89-13 program

For the specific heat exchangers selected:

Testing Documents

6. Copies of the two most recent completed tests confirming thermal performance for those heat exchangers which are performance tested

7. Instrument uncertainties of the instruments used during testing

8. Copy of any operability determinations or other documentation of degradation associated with the heat exchangers or the systems that support the operation for the selected heat exchangers

9. Documents that show the as-found results are recorded, evaluated, and appropriately dispositioned such that the as-left condition is acceptable

Cleaning Documents

10. The cleaning and inspection maintenance schedule for each heat exchanger for the next five years

11. Copy of the document describing the inspection results for the last two cleaning and inspection activities completed on each heat exchanger

12. Cleaning procedures with acceptance criteria for the selected heat exchangers

13. Copies of the documents that verify the structural integrity of the heat exchanger, e.g., eddy current summary sheets, ultrasonic testing results, and visual inspection results

14. Copies of those documents that describe the methods taken to control water chemistry in the heat exchangers

Design Documents

15. Copies of the design basis documents and updated final safety analysis report pages for the selected heat exchangers

16. Provide a list of calculations with a description which currently apply to each heat exchanger

17. Copies of vendor data sheets and design basis data for the selected heat exchangers

18. Copy of the calculation which establishes the limiting (maximum) design basis heat load which is required to be removed by each of these heat exchangers

19. Copy of the calculation which correlates surveillance testing results from these heat exchangers with design basis heat removal capability (e.g., basis for surveillance test acceptance criteria)

20. Copy of the calculations or documents which evaluate the potential for water hammer or excessive tube vibration in the heat exchanger or associated piping

21. Copy of the document which identifies the current number of tubes in service for each heat exchanger and the supporting calculation which establishes the maximum number of tubes which can be plugged in each heat exchanger

22. Copy of the document establishing the repair criteria (plugging limit) for degraded tubes which are identified in each heat exchanger

For the ultimate heat sink or safety-related service water system:

23. Dam inspections that monitor the integrity of the ultimate heat sink (if applicable)

24. Copies of calculations and surveillances that determine the ultimate heat sink reservoir capacity and heat transfer capability (if applicable)

25. Copies of any design changes performed on the ultimate heat sink or safety-related service water system

26. Copies of procedures for a loss of ultimate heat sink or safety-related service water system

27. Copies of inspections and/or maintenance related to macrofouling (silt, mussel shells, debris, etc.) and aquatic life

28. Copies of inspections and/or maintenance related to preventing biotic fouling

29. Copies of procedures and/or test results to survey or monitor interface valves between the safety-related section of the service water system and the nonsafety-related section

30. Copy of the most recent service water flow balance test results, both as-found and as-left

31. History of any thru-wall pipe leaks on the safety-related service water system

Inspector Contact Information:
Chris Smith
Reactor Inspector
817-200-1095
Chris.smith@nrc.gov

Mailing Address:

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