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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 26, 2013

Vice President, Operations
Entergy Operations, Inc.
River Bend Station
5485 US Highway 61N
St. Francisville, LA 70775

SUBJECT: RIVER BEND STATION, UNIT 1 - PRELIMINARY ACCIDENT SEQUENCE
PRECURSOR ANALYSIS FOR LICENSEE REVIEW (TAC NO. MF2599)

Dear Sir or Madam:

Enclosed is the preliminary result of an Accident Sequence Precursor (ASP) analysis of an operational event that occurred at River Bend Station, Unit 1 (RBS), as documented in Licensee Event Report 459/12-003 and inspection reports 50-458/12-09, 50-458/12-10. The event occurred on May 24, 2012; while operating at 33 percent power, RBS experienced loss of power to all running feedwater (FW), circulating water (CW), and normal service water (SW) pumps. The operators initiated a manual reactor scram due to the trip of all running FW and CW pumps. The plant entered EOP-1, "Reactor Pressure Vessel Control," which initiated the reactor core isolation cooling (RCIC) system. Soon after the manual scram, the control room received a report of smoke from the circuitry board for FW pump B. Power was restored to the Train B CW and normal SW pumps via the Train A Buses; however, the pumps remained unavailable due to a cable failure that occurred on May 21, 2012. The operators used the RCIC system for level control and the safety relief valves for pressure control. RBS safely shut down and stabilized under cold shutdown conditions. The preliminary conditional core damage probability (CCDP) of this event is 3×10^{-4} ; therefore, this event is a potential precursor. A precursor is an event that has a probability of at least 1 in 1,000,000 (i.e., a CCDP greater than or equal to 1×10^{-6}) of leading to core damage.

The U.S. Nuclear Regulatory Commission (NRC) established the ASP Program in 1979 in response to the Risk Assessment Review Group Report. The ASP Program systematically evaluates U.S. nuclear power plant operating experience to identify, document, and rank the operating events most likely to lead to inadequate core cooling and severe core damage (precursors).

As described in the NRC Regulatory Issue Summary (RIS) 2006-24, "Revised Review and Transmittal Process for Accident Sequence Precursor Analyses," the Office of Nuclear Regulatory Research implemented several process changes to the ASP Program. In accordance with the RIS, this event has a CCDP greater than or equal to 1×10^{-4} ; therefore, a formal licensee review is requested.

The Enclosure to this letter contains Sensitive Information. When separated from the Enclosure, this letter is DECONTROLLED.

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In assessing operational events, the NRC staff strives to make the ASP models as realistic as possible regarding the specific features and response of a given plant to various accident sequence initiators. We realize that licensees may have additional systems and emergency procedures, or other features at their plants that might affect the analysis. Therefore, we are providing you an opportunity to review and comment on the technical adequacy of the preliminary ASP analysis, including the depiction of plant equipment and equipment capabilities.

Upon receipt and evaluation of your comments, we will revise the CCDP calculations where necessary to consider the specific information you have provided. The object of our review process is to provide as realistic an analysis of the significance of the event as possible.

In order for us to incorporate your comments, perform any required reanalysis, and prepare the final report of our analysis in a timely manner, you are requested to complete your review and to provide any comments within 60 calendar days from the date of this letter. As soon as our final analysis of this event has been completed, we will provide for your information the final ASP analysis and the resolution of your comments.

The enclosed preliminary ASP analysis is pre-decisional material and, therefore, not publicly available. The document must be distributed only to those who have a need-to-know to conduct official business. When completed, the final ASP analysis will be publicly released.

If you have any questions regarding the report, please contact me at Alan.Wang@nrc.gov or (301) 415-1445.

Sincerely,



Alan B. Wang, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-458

Enclosure:
Preliminary Precursor Analysis

cc w/o Enclosure: Distribution via Listserv

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/RA/

Alan B. Wang, Project Manager
Plant Licensing Branch IV
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NAME	AWang	JBurkhardt	MMarkley	AWang
DATE	8/26/13	8/21/13	8/26/13	8/26/13

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