EC-2011-0420 Status Report December 16, 2011

Issue:

Ameren Missouri[1] Failure to File Taum Sauk Incident Report Complaint

Conclusion:

Staff believes the incident as described below is a reportable event/incident as detailed in Commission Rule 4 CSR 240-3.190.

Analysis:

An event occurred at Taum Sauk on Monday, June 6, 2011, at 22:45, described more specifically by Mr. Mark Birk, Vice President of Ameren Missouri Operations, in an e-mail received by the Staff on June 21, 2011, as follows:

> On Monday, 6/6/11 at 22:45 Taum Sauk Unit 1 tripped while pumping. Protective relaying indicated a potential stator fault and an initial generator inspection revealed burn marks on some of the generator stator cover plates. Following unit cool down an Ameren Missouri engineer removed the stator cover plates, where the burn marks were observed, and performed a visual inspection. This inspection indicated that several stator bars had been damaged and would need to be repaired or replaced. Ameren Missouri engineers then contacted NEC and GE (two vendors who specialize in this type of repair work) and they performed additional inspections on the unit on Thursday 6/9 and Friday 6/10, following these inspections both vendors proposed repair and rewind options but neither vendor would guarantee their work if we chose the repair option. Both vendors would only guarantee their work if we elected to perform a full rewind and based upon the extent of the damage Ameren Missouri engineers concurred with their recommendations for a full rewind. On Friday, 6/17/11, after further discussions with NEC and GE we decided to select GE to perform a full rewind on Unit 1 and issued GE a P.O. to begin stator bar manufacturing. It is estimated that it will take about 29 weeks to manufacture the stator bars and about 8 weeks following bar manufacture to rewind the generator. We currently expect the unit to return to service in late March of 2012 providing that no additional damage is found on the stator iron or rotor pole pieces once the unit is fully disassembled. While both generators were inspected during the recent upper reservoir rebuild no significant work was performed on either generator. This outage will not have any effect on Unit 2 which remains in service. (Email to David Elliott, Guy Gilbert, Lena Mantle and Nathan Williams. Received at 4:01 pm on June 21, 2011).

[1] Union Electric Company d/b/a Ameren Missouri is referred to in this report as "Ameren Missouri."

Staff was not aware of the event until June 14, 2011, when members of the Staff visited Taum Sauk for the Taum Sauk Project one-year follow-up Potential Failure Mode Analysis (PFMA) meeting. This was the final meeting at which all parties were scheduled to convene regarding the rebuilding of the Taum Sauk reservoir. As a part of the meeting, the Staff, along with other meeting attendees, were shown generating Unit Number 1, which had sustained significant damage as a result of some yet-to-be-determined cause, resulting in an extensive fire and melting of parts of the generator stator (the stationary part of the generator). The damage to Unit Number 1 was visibly observable by Staff at its June 14, 2011 plant visit.

Initial estimates provided by Ameren Missouri to Staff at the PFMA meeting described above indicated that the property damage and associated repairs would cost $10 million or greater. The group at the PFMA meeting was informed that the fire department had been called to the powerhouse on the evening of June 6, 2011, but that Ameren Missouri employees had put out the fire by the time the fire department arrived.

Commission Rule 4 CSR 240-3.190

Commission Rule 4 CSR 240-3.190, Reporting Requirements for Electric Utilities and Rural Electric Cooperatives, prescribes the requirements and procedures for the reporting of certain events by electric utilities, specifically:

> (3) Every electric utility shall report to the manager of the Energy Department of the commission or his/her designee by telephone or through EFIS by the end of the first business day following discovery, the information described in subsections (3)(A)–(E) below. The electric utility shall submit, either by mail or through EFIS within five (5) business days following the discovery, an update of the incident and any details not available at the time of the initial report:
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> (A) Details of any accident or event at a power plant involving serious physical injury or death or property damage in excess of two hundred thousand dollars

($200,000). A detailed investigative report of the accident or event shall be submitted within ninety (90) days, or if the investigation will take longer than ninety (90) days, a draft of the plan for the investigation shall be submitted within ninety (90) days;

(B) Forced outages of any nuclear generating unit(s) that could reasonably be anticipated to last longer than three (3) days;

(C) Forced outages of any fossil-fuel fired generating unit(s) with an accredited capacity of greater than one hundred (100) megawatts that reasonably could be anticipated to last longer than three (3) days, when the unit(s) is forced out due to a common occurrence;

(D) Reductions of coal inventory below a thirty (30)-day supply and reductions of oil inventory below fifty percent (50%) of normal oil inventory; and

(E) Loss of transmission capability that could limit the output of a generating plant.

Conclusion:

In compliance with Commission Rule 4 CSR 240-3.190 (3) (A) above Ameren Missouri has submitted to the Staff the 90 day report noted as Attachment 1.

In addition to the Staff's initial discovery visit on June 13 and 14, 2011, the Staff has conducted three follow up site visits and exchanged several phone calls and emails with Ameren Missouri concerning the status and progress of repairs to the Unit 1 Generator. During these visits the Staff observed the dismantlement of the generator (June 26, 2011), post asbestos abatement (September 29, 2011) and the in-progress reconstruction (December 7, 2011) of Unit 1. During the project some delays have been experienced due to the discovery of additional generator electrical circuit integrity issues and generator stator bar fitting problems. Conversely the project has also experienced positive and schedule offsetting acceleration due to the success of the implementation of new proprietary rebuild methodologies. In summary, as of the Staff's last

visit, there currently do not appear to be any impediments to achieving the scheduled project completion date of early March 2012.

As of this date the root cause analysis concerning the cause of the failure is not complete and may not be complete until after the unit has been returned to service and all analysis is complete. The Staff currently has tentative arrangements to again visit the site in January 2012.