



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

March 19, 2020

LICENSEE: Talen Energy

FACILITY: Susquehanna Steam Electric Station, Units 1 and 2

SUBJECT: SUMMARY OF FEBRUARY 27, 2020, MEETING WITH TALEN ENERGY REGARDING FUTURE LICENSE AMENDMENT REQUEST RELATED TO CREATING NEW CONDITION FOR INOPERABLE MANUAL SYNCHRONIZATION CIRCUIT (EPID L-2019-LRM-0069)

On February 27, 2020, a Category 1 public teleconference was held between the U.S. Nuclear Regulatory Commission (NRC) staff and representatives of Talen Energy (the licensee) at NRC Headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The purpose of the meeting was to discuss a future license amendment request to create a new technical specification (TS) condition for an inoperable manual synchronization circuit and institute a completion time (CT) of 14 days to restore the circuit to an operable status for Susquehanna Steam Electric Station (Susquehanna), Units 1 and 2. The meeting notice dated February 10, 2020, is available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML20042E722. A list of attendees is enclosed.

Talen Energy provided presentation slides (ADAMS Accession No. ML20058B167). The licensee expects to submit the license amendment request by the end of March 2020.

The proposed amendments would modify existing Limiting Condition for Operation (LCO) 3.8.1, "AC [Alternating Current] Sources – Operating," to create a new condition for an inoperable manual synchronization circuit and institute a CT of 14 days to restore the circuit to an operable status. The premise for this request is based on failure of a synchronization selector switch. The licensee stated that the synchronization switch circuit impacts the bus transfer scheme for preferred power sources and onsite power sources for both Susquehanna units and results in both units entering TS-related LCO 3.0.3, which requires unit shutdown immediately. However, the licensee noted that the safety functions of the offsite and onsite power systems, as assumed in Susquehanna's safety analyses, are not adversely impacted.

Susquehanna is proposing that the required action of a dual unit shutdown is not commensurate with the overall risk of the configuration. The licensee explained that the circuits associated with the synchronization hand switch are shared by all diesel generators and the 4.16 kilovolt (kV) and 13.8 kV safe shutdown buses on both units. However, the automatic transfers associated with a unit trip or diesel generator powering the safety buses following loss-of-offsite-power (LOOP) event are not impacted by an inoperable manual synchronization circuit. Therefore, all assumptions of the accident analyses are met for this condition.

During the meeting with Talen Energy, the NRC staff discussed the loss of synchronization capability for diesel generator testing and restoration of plant buses to the preferred power source after recovering from a LOOP event. The staff noted that safety bus voltage and

frequency monitoring circuits also provided input to the synchronization circuits, and therefore, the staff needed to understand the consequences of switch failures on the associated circuits. The NRC staff requested a logic diagram, as well as simplified drawings, to help understand the circuit and the impact on the onsite and offsite power systems.

The licensee discussed the potential delay in TSs currently applicable for monthly surveillance of the diesel generators and the safety significance of the ability to reconnect the safety buses to the preferred power source (after recovery from a LOOP event) if an entry into the proposed LCO is implemented during plant operation. The NRC staff also stated that a 14-day CT appears long for switch replacement, considering a 6-day CT associated with a diesel generator outage. The proposed CT should be commensurate with the time required to restore the synchronization circuit to an operable status. A justification based on past operating experience should be provided to support the proposed CT.

No regulatory decisions were made during the meeting. Members of the public were not in attendance. Public meeting feedback forms were not received.

Please direct any inquiries to me at 301-415-8004 or [Sujata.Goetz@nrc.gov](mailto:Sujata.Goetz@nrc.gov).

*/RA/*

Sujata Goetz, Project Manager  
Plant Licensing Branch I  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-387 and 50-388

Enclosure:  
List of Attendees

cc: Listserv

LIST OF ATTENDEES

FEBRUARY 27, 2020, MEETING WITH TALEN ENERGY REGARDING FUTURE LICENSE

AMENDMENT REQUEST

RELATED TO CREATING NEW CONDITION FOR INOPERABLE MANUAL

SYNCHRONIZATION CIRCUIT

SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

| <b>Name</b>        | <b>Affiliation</b>                       |
|--------------------|--|
| Sujata Goetz       | U.S. Nuclear Regulatory Commission (NRC) |
| Gurcharan Matharu* | NRC                                      |
| Roy Mathew         | NRC                                      |
| Tarico Sweat*      | NRC                                      |
| Shane Jurek*       | Talen Energy                             |
| Katie Brown*       | Talen Energy                             |
| Melisa Krick*      | Talen Energy                             |
| Jason Lada*        | Talen Energy                             |
| Jeff Oswald*       | Talen Energy                             |
| Rob Peterson*      | Talen Energy                             |

\*participated by teleconference

SUBJECT: SUMMARY OF FEBRUARY 27, 2020, MEETING WITH TALEN ENERGY REGARDING FUTURE LICENSE AMENDMENT REQUEST RELATED TO CREATING NEW CONDITION FOR INOPERABLE MANUAL SYNCHRONIZATION CIRCUIT (EPID L-2019-LRM-0069) DATED MARCH 19, 2020

**DISTRIBUTION:**

|                               |                             |
|-------------------------------|-----------------------------|
| PUBLIC                        | GMatharu, NRR               |
| PM File Copy                  | RidsACRS_MailCTR Resource   |
| RidsNrrPMSusquehanna Resource | RidsRgn1MailCenter Resource |
| RidsNrrDorlLpl1 Resource      | RidsNrrDorl Resource        |
| RidsNrrLALRonewicz Resource   | TSweat, NRR                 |
| SGoetz, NRR                   | RMathew, NRR                |

**ADAMS Accession No.: ML20065F552**

|        |                  |                  |                  |                  |
|--------|------------------|------------------|------------------|------------------|
| OFFICE | NRR/DORL/LPL1/PM | NRR/DORL/LPL1/LA | NRR/DORL/LPL1/BC | NRR/DORL/LPL1/PM |
| NAME   | SGoetz           | LRonewicz        | JDanna           | SGoetz           |
| DATE   | 03/10/2020       | 03/05/2020       | 03/19/2020       | 03/19/2020       |

**OFFICIAL RECORD COPY**