



Liberty Utilities (The Empire District Electric Company)

Case No. EA-2023-0131

Missouri Public Service Commission Data Request - 0050

Data Request Received: 2023-12-21

Response Date: 2024-01-10

Request No. 0050

Witness/Respondent: Brian Berkstresser

Submitted by: Michael Rush, michael.rush@psc.mo.gov

REQUEST:

Has a root cause analysis of the "fire in the insulation around the turbine exhaust bearing" been completed? If so, please provide the results of that root cause analysis. If not, please explain how the fire risk due to the root cause of the fire is to be mitigated in the future.

RESPONSE:

The fire was caused by a leaking labyrinth oil seal that caused lube oil to saturate the insulation around the bearing. The heat from the unit eventually caused the oil to ignite.

Upon inspection of the oil seal, it was discovered that some of the drain ports between the labyrinths were plugged up and not allowing oil to drain out properly. This caused the oil to leak into the insulation instead of back to the lube oil tank. These ports have been cleaned and the lube oil system has been flushed to prevent this from happening again.



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Case No. EA-2023-0131

Missouri Public Service Commission Data Request - 0018

Data Request Received: 2023-03-03

Response Date: 2023-03-21

Request No. 0018

Witness/Respondent: Brian Mushimba

Submitted by: Shawn Lange, Shawn.Lange@psc.mo.gov

REQUEST:

20 CSR 4240-3.190 (3)(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; Please provide the timeline and an explanation of what happened with regard to the fire at Riverton 10. Please provide any Company report/memo or other document describing and documenting what happened. Please provide all reports/memos or other documents describing and illustrating all damage that was incurred by the fire and shutdown of the unit.

RESPONSE:

A fire was discovered around the exhaust bearing on 2-8-21 at approximately 22:30. Plant personnel initiated a shutdown and shut off bearing oil prior to the rotor coming to a stop to prevent the fire from spreading further. The bearing fire protection system dumped. Additionally, plant personnel used handheld fire extinguishers to extinguish the fire. Please see the attachment labeled "Unit 10 Bearing Fire Description May21.pdf" for additional information. The unit was later studied as part of the triennial IRP.

There are no reports within the meaning of the rule cited within this DR request, as the Company did not view this as a reportable "accident or event."

Unit 10 Bearing fire description:

On Feb. 8th 2021, I received a call around 2230 to inform me of a high temperature indicated on Unit 10 inlet bearing and a fire in the insulation below it. The operators were looking for guidance on how to proceed. I instructed plant personnel to call the fire department, continue attempting to extinguish the fire with portable fire extinguishers, and shut off oil supply to remove the fuel source. Plant personnel were able to extinguish the flame and did not see it restart, but there was a lot of smoke and heat built up in the area below the bearing due to the fire. Insulation was removed as is customary to ensure the fire wouldn't restart. The fire department stayed on-site until we were certain there would be no reignition and then were released.

Numerous discussions were had about repair, Ethos was contacted and a quote was delivered on May 13, 2021.

John Shipley



Liberty Utilities (The Empire District Electric Company)

Case No. EA-2023-0131

Missouri Public Service Commission Data Request - 0021

Data Request Received: 2023-03-09

Response Date: 2023-03-21

Request No. 0021

Witness/Respondent: Brian Mushimba

Submitted by: Keith Foster, keith.foster@psc.mo.gov

REQUEST:

Paragraph 11 of Empire Electric's Application states "On February 8, 2021, Riverton Unit 10 went offline as a result of a fire in the insulation around the turbine exhaust bearing. In order to minimize the fire damage, the lube oil system was shut down prior to the rotor coming to a stop, further damaging the unit." On June 2, 2021, in Case No. ER-2021-0312, Staff submitted Data Request No. 0011 which asked Empire Electric to "1) Please identify the events and quantify the cost associated with each event that occurred since January 1, 2019, to current that the Company considered abnormal or not representative of continuing operations, and quantifying the projected dollar impact of each." In its response Empire Electric stated that it only considered Winter Storm Uri, which also occurred in February 2021, as falling into that category. Please explain, in detail, why Empire Electric did not consider the fire that shut down Riverton 10 to be an event considered to be abnormal or not representative of continuing operations.

RESPONSE:

The insulation fire on Riverton Unit 10 around the turbine exhaust bearing that happened on February 8th, 2021, took that unit offline and triggered internal investigations into the cause of the fire and possible repair plans. It is standard industry practice and an operational expectation in this occurrence that bearing lube oil be shut off to stop the flow of further fuel to the fire to contain and be able to put out the fire. Thus, this was not considered an abnormal occurrence and not applicable to the DR issued on June 2, 2021 in Case No ER-2021-0312.



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Case No. EA-2023-0131

Missouri Public Service Commission Data Request - 0022

Data Request Received: 2023-03-09

Request No. 0022

Submitted by: Keith Foster, keith.foster@psc.mo.gov

Response Date: 2023-03-21

Witness/Respondent: Charlotte Emery

REQUEST:

Please identify the date Empire Electric notified the Missouri Public Service Commission of the February 8, 2021, fire at Riverton 10. Please identify, by name(s), who was notified and provide copies of any and all forms of communication in which the notification was relayed and confirmed.

RESPONSE:

Notification was provided in the Company's Monthly Outage Report submitted as part of the 20 CSR 4240-3.190 filing, noting the fire and the unit outage. Each month, the Company served the filing to the following: staffcounsel@psc.mo.gov, opc@opc.mo.gov, lena.mantle@opc.mo.gov, John.Riley@opc.mo.gov. Below are the tracking numbers assigned to each EFIS submission.

Mar 2021 – BEGR-2021-1768
Apr 2021 – BEGR-2021-1907
May 2021 – BEGR-2021-1980
Jun 2021 – BEGR-2022-0045
Jul 2021 – BEGR-2022-0089
Aug 2021 – BEGR-2022-0124
Sep 2021 – BEGR-2022-0174
Oct 2021 – BEGR-2022-0227
Nov 2021 – BEGR-2022-0258
Dec 2021 – BEGR-2022-0344
Jan 2022 – BEGR-2022-0455
Feb 2022 – BEGR-2022-1142
Mar 2022 – BEGR-2022-1733
Apr 2022 – BEGR-2022-1862
May 2022 – BEGR-2022-1953

Jun 2022 – BEGR-2023-0068
Jul 2022 – BEGR-2023-0145
Aug 2022 – BEGR-2023-0187
Sep 2022 – BEGR-2023-0245
Oct 2022 – BEGR-2023-0315
Nov 2022 – BEGR-2023-0375
Dec 2022 – BEGR-2023-0464
Jan 2023 – BEGR-2023-0606



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Case No. EA-2023-0131
Missouri Public Service Commission Data Request - 0023

Data Request Received: 2023-03-09

Request No. 0023

Submitted by: Keith Foster, keith.foster@psc.mo.gov

Response Date: 2023-03-21

Witness/Respondent: Brian Mushimba

REQUEST:

Did Empire Electric request and/or compute estimated costs to have the damaged Riverton 10 parts manufactured? If so, please provide a copy of those estimates including any supporting documentation supplied by the manufacturers.

RESPONSE:

Plant personnel used their best engineering judgement to estimate that the total cost for repair would be \$750,000. This is based on years of engineering experience with combustion turbines and the repair costs for similar types of damage.



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Missouri Public Service Commission Data Request - 0024

Data Request Received: 2023-03-09

Response Date: 2023-03-21

Request No. 0024

Witness/Respondent: Brian Mushimba

Submitted by: Keith Foster, keith.foster@psc.mo.gov

REQUEST:

1) Did Empire Electric submit any claims to its insurer(s) to recover any losses associated with the Riverton 10 fire? If so, please provide complete copies of the submitted claim(s). 2) Did Empire Electric receive any payments from its insurer(s) for the losses associated with the Riverton 10 fire? If so, please provide copies of the payments and identify to what general ledger accounts the proceeds were recorded. 3) Please provide complete copies of all correspondence (including any attachments) between Empire and its insurer(s) regarding the Riverton 10 fire claim(s).

RESPONSE:

- 1) No.
- 2) No.
- 3) None.