

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

FILED²

JUN 06 2000

Missouri Public
Service Commission

In the Matter of Kansas City Power &
Light Company Regarding an Incident at
the Hawthorn Station, Kansas City,
Missouri, on February 17, 1999.

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Case No. ES-99-581

**INCIDENT INVESTIGATION
THIRD INTERIM REPORT**

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Missouri Public
Service Commission

**Boiler No. 5 Destruction
Hawthorn Plant
Kansas City, Missouri**

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Hawthorn Boiler No. 5 Incident

Third Interim Report

Summary

This third interim report includes information known as of June 5, 2000. The incident occurred on February 17, 1999. The investigations by Kansas City Power & Light Company (KCPL) and the insurance investigation team from Crawford Investigation Services (CIS) are not complete. Staff will rely, in part, on these reports to complete its investigation, so no conclusions or recommendations have been included in the Missouri Public Service Commission Staff's (Staff) third interim report. The Staff will continue to visit the site, review documents related to the incident and monitor the investigation by KCPL and CIS. After all of the information from that investigation is available, and the Staff has completed its own review and investigation, the Staff will file a final report with the Commission.

At the time of the explosion, early in the morning of February 17, 1999, there were a total of seventeen (17) people on site. There were no OSHA reportable injuries due to the explosion. The coal-fired boiler, which is capable of supplying steam to produce approximately 470 MW, was not operating.

Staff Investigation

The Staff continues to collect and review data and information on the boiler design; the burner management system design and operation; the boiler operation procedures including startup and shut down procedures; the safety procedures; the operator training records; the boiler maintenance records; the control room data printouts, and other items.

In addition, the Staff continues to monitor the status of the KCPL and CIS investigation, to review additional information as it becomes available, and to visit the site to review documents and discuss the investigation with KCPL personnel. To date, the Staff has made ten site visits since the explosion.

KCPL has informed Staff that when the investigation has been completed, a final report of the results of the investigation will be made available.

Status of KCPL and CIS Investigation

KCPL still believes the incident was caused by an explosion of natural gas in the boiler. Because the boiler had a burner management system with safety interlocks designed to prevent fuel from entering the boiler at an inappropriate time, the investigation has concentrated on possible scenarios which would have allowed gas to enter the boiler.

Approximately five years of historical maintenance records of Hawthorn Station are currently under review by both KCPL and CIS. Voluminous pages of KCPL maintenance records that are on microfilm are presently being converted, by an outside contractor, to CD-ROM. This will allow for a computer search of all maintenance records related to the Hawthorn unit. Since the last interim report the outside contractor has scanned the

documents and has determined approximately 450,000 pages need to be converted to CD-ROM. The original estimate was between 200,000 and 250,000 pages. Based on the increased number of pages to be converted, KCPL has revised its schedule and now estimates that it will be sometime in June 2000, before this conversion can be completed. KCPL expects to provide a report on their investigation and findings to the Staff on August 1, 2000.

Site Cleanup

The damaged boiler and auxiliary equipment have been removed from the site.

Replacement Power

Since February 1999, KCPL continues to utilize its other generating units as well as making purchases of energy in the available market to cover the loss of the Hawthorn #5 coal-fired generating station. KCPL has made several reports to the Staff on capacity requirements since the Hawthorn #5 incident, and Staff will continue to monitor KCPL's capacity requirements through the summer peak periods. Staff will receive and review the total cost of the replacement energy after KCPL resumes operation of Hawthorn Unit #5, and report the findings to the Commission.

Damage Repairs

Construction of a new coal-fired boiler, on the same site, began in September 1999, with the pouring of new footings. As of May 11, 2000, approximately two-thirds of the

structural steel has been erected. KCPL anticipates the completion date of the new boiler will be June 2001. Independent of this investigation, the Staff is conducting an engineering review of this new boiler project.

Conclusion

The Staff anticipates filing a formal incident report with the Commission approximately 90 to 120 days after receiving from KCPL the separate or combined final reports of KCPL and CIS. This will allow Staff time to review the final reports and other documents and make its own determination and report to the Commission. The Staff will file another interim report within 120 days of this report if the Staff's investigation is not complete at that time.