

FILED

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

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**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
SECOND INTERIM REPORT**

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

Prepared by the Staff of the
Missouri Public Service Commission

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Dated: February 4, 2000

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Hawthorn Boiler No. 5 Incident

Second Interim Report

Summary

This second interim report includes information known as of February 2, 2000. The incident occurred on February 17, 1999. The investigations by Kansas City Power and Light Company (KCPL) and the insurance investigation team from Crawford Investigation Services (CIS) are not complete so no conclusions or recommendations have been included in the Missouri Public Service Commission Staff's (Staff) second interim report. The Staff will continue to monitor the investigation by KCPL and CIS and, 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 operator training records; the boiler maintenance records and other items.

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 nine 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 on microfilm are presently being converted, by an outside contractor, to CD-ROM for computer search capability. KCPL estimates that it will be April 30, 2000, before the conversion and a review of the records can be completed.

Site Cleanup

The damaged boiler and auxiliary equipment have been removed from the site (See photographs 1 and 2 in Appendix A).

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. Staff has monitored and 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 initial pouring of new footings (See photograph 3 in Appendix A). KCPL anticipates the completion date of the new boiler will be June 2001.

Conclusion

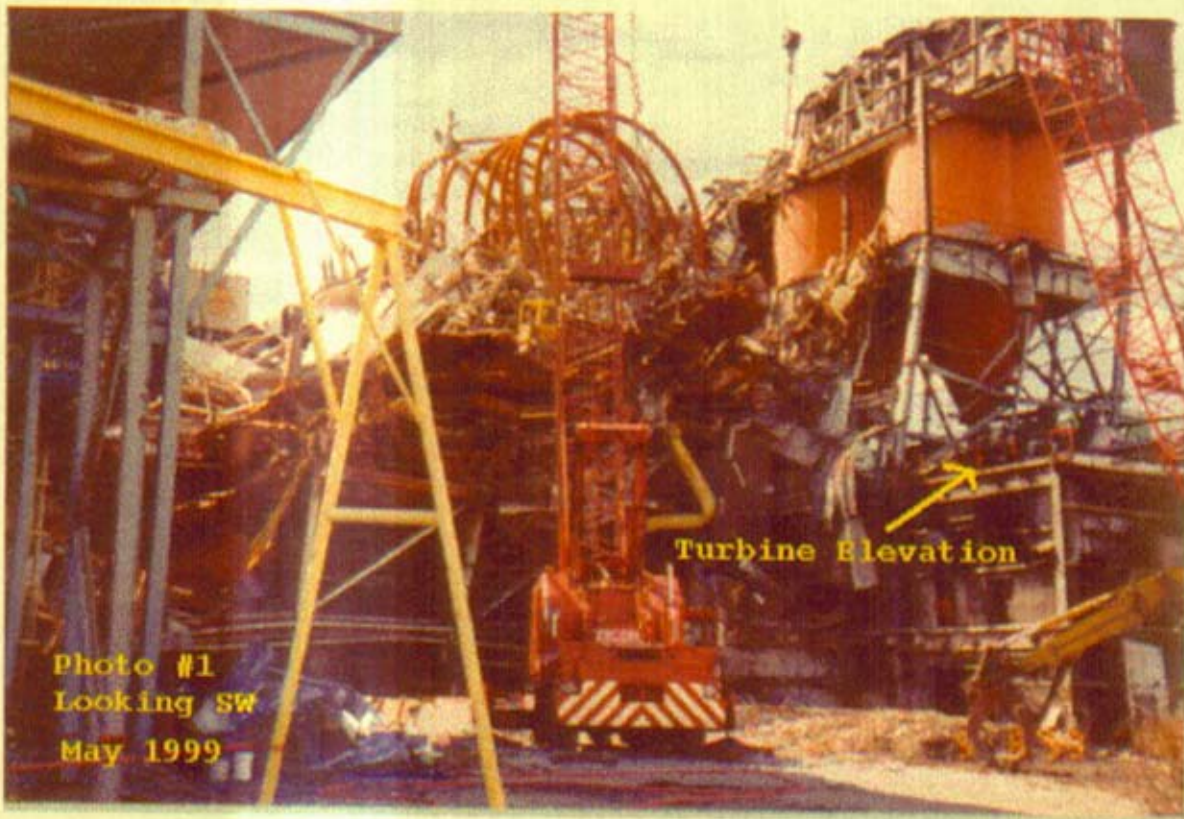
The Staff anticipates filing a formal incident report with the Commission approximately 90 to 120 days after receiving from KCPL the separate or combined final reports of KCPL and CIS. This will allow Staff time to review the final reports and other documents and make its own determination and report 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.

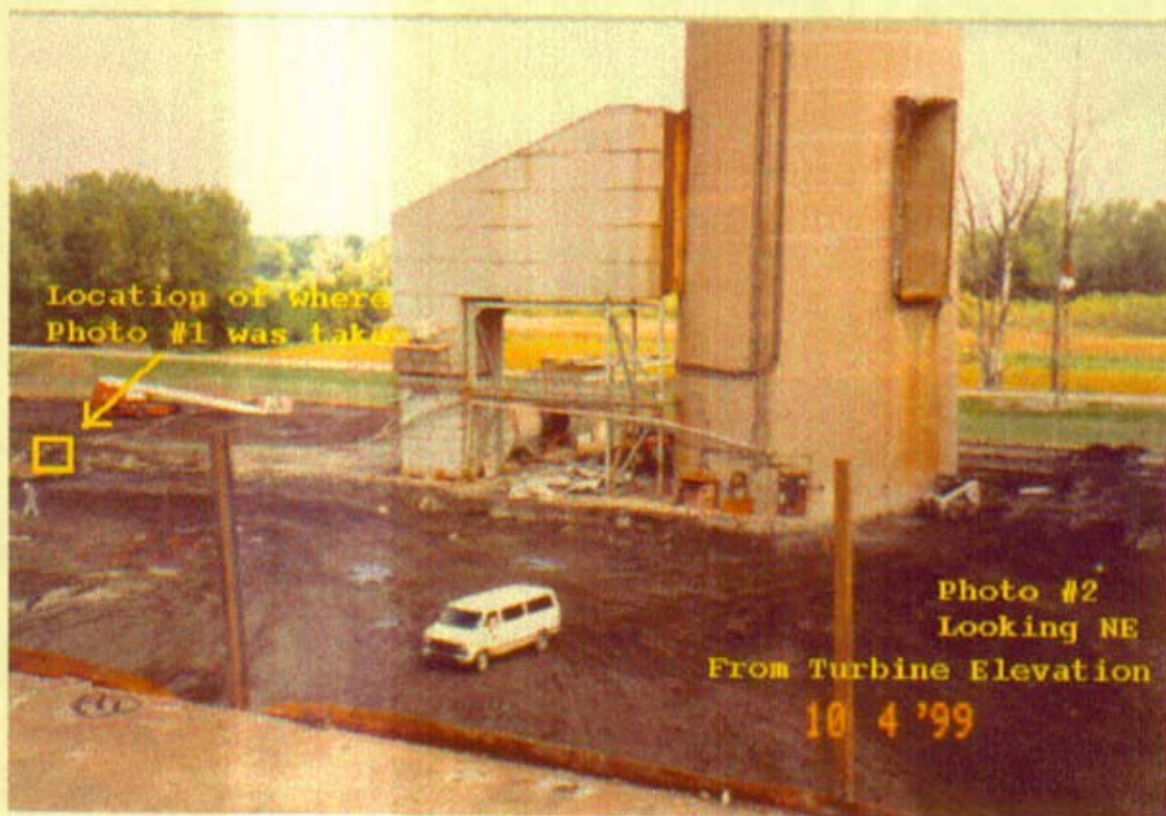
APPENDIX A

Photo #1 This photograph was taken on May 6, 1999, and shows the damage to the boiler.

Photo #2 This photograph was taken on October 4, 1999, and shows the boiler area after clean up.

Photo #3 This photograph was taken on October 4, 1999, and shows construction of some of the footings.







**Service List For
Case No. ES-99-581
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