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March 27, 2001

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Secretary/Chief Regulatory Law Judge

DANA K. JOYCE
General Counsel

FILED³

MAR 27 2001

Missouri Public
Service Commission

Mr. Dale Hardy Roberts
Secretary/Chief Regulatory Law Judge
Missouri Public Service Commission
P. O. Box 360
Jefferson City, MO 65102

RE: Case No. ES-99-581 - Kansas City Power & Light Company

Dear Mr. Roberts:

Enclosed for filing in the above-captioned case are an original and eight (8) conformed copies of the **STIPULATION AND AGREEMENT** in HC version.

This filing has been mailed or hand-delivered this date to all counsel of record.

Thank you for your attention to this matter.

Sincerely yours,

Lera L. Shemwell
Associate General Counsel
(573) 751-7431
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LLS:sw
Enclosure
cc: Counsel of Record

BEFORE THE PUBLIC SERVICE COMMISSION
STATE OF MISSOURI

FILED²

MAR 27 2001

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.

Case No. ES-99-581

STIPULATION AND AGREEMENT

COMES NOW the Staff of the Missouri Public Service Commission ("Staff"), the Office of the Public Counsel ("OPC"), and Kansas City Power & Light Company ("KCPL"), (collectively the "Parties"), and submit this Stipulation and Agreement that adopts the Parties clarifications understandings, and agreements concerning the Recommendations contained in Staff's January 26, 2001 Final Electric Incident Report concerning the Hawthorn Station Boiler No. 5 Explosion ("Final Report"). A copy of the Recommendations is attached at Attachment "C."

DESCRIPTION OF PROCEEDINGS

On January 25, 2001, Staff filed its Final Report concerning Staff's investigation of the Hawthorn 5 Boiler Explosion. On February 1, 2001, the Commission issued an order directing KCPL to respond to the Final Report. On February 26, 2001, KCPL filed its response to the Final Report ("Response"). In its Response, KCPL requested clarification of some of the terms in the Recommendations that Staff had proposed in its Final Report. On February 22, 2001, and March 9, 2001, Staff and KCPL discussed and agreed to the clarifications, requirements and schedule contained in this Stipulation. As a result of these discussions, KCPL and Staff have reached a resolution regarding implementation of the recommendations contained in the Final Report.

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DATE 8/14/01 per Order

*Reclassifying Records
and Closing Case - nh*

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STIPULATIONS AND AGREEMENTS

1. KCPL shall hire a consultant, qualified in the National Fire Protection Association Codes and Standards ("NFPA"), to review and test the fuel-trip-control logic of the burner management systems ("BMS") for each of its non-nuclear power plant boilers to determine whether the failure of any one device of the control system could result in a condition that is likely to result in or lead to a catastrophic event, such as an explosion or fire.

2. Prior to making any design modifications to a BMS, KCPL shall have the proposed design modification reviewed by a consultant and/or other knowledgeable persons, to determine if the modification meets the latest revision of the NFPA Code and Standard for the Prevention of Furnace Explosions/Implosions in Multiple Burner Boiler-Furnaces.

3. In the event KCPL modifies the fuel-trip-control logic of any BMS or fuel management control system ("FMCS") on a combustion turbine ("CT"), KCPL shall specifically identify the control-logic-trip sequence.

4. With respect to its review of each power plant boiler's BMS, KCPL shall prepare a report ("BMS Report") of its findings for each BMS that includes, at least:

- a) a description of the fuel trip control logic for each power plant boiler;
- b) a description of the testing done;
- c) a list of drawings and manuals reviewed;
- d) a copy of the applicable NFPA Code and Standard used for each power plant boiler;

- e) a description of any part of the BMS that is identified as not meeting the applicable NFPA Codes and Standards;
- f) a list of the consultant's suggested BMS modifications;
- g) a copy of the consultant's recommendations and conclusions.
- h) in the event the review determines that modifications to the BMS are necessary to ensure a safe trip condition, the BMS Report shall also include a description of the modifications made to each BMS.

5. KCPL shall hire a consultant qualified in applicable standards for FMCS for CTs to determine whether the failure of any one device of the control systems could result in a condition that is likely to result in or lead to a catastrophic event.

6. Prior to making any design modifications to a FMCS, KCPL shall have the proposed design modification reviewed by a consultant and/or other knowledgeable persons, to determine if the modification meets the latest revision of the applicable codes and standards for CTs.

7. In the event KCPL modifies the fuel-trip-control logic of any FMCS, KCPL shall specifically identify the control-logic-trip sequence.

8. KCPL shall prepare a report (FMCS Report) of its findings concerning each CT and that unit's FMCS that shall include, at least:

- a) a description of the fuel trip control logic for each CT;
- b) a description of the testing done;
- c) a list of drawings and manuals reviewed;
- d) a copy of the applicable codes and standards used for each CT;

- e) a description of any part of the FMCS that is identified as not meeting the applicable codes and standards;
- f) a list of the consultant's suggested FMCS modifications;
- g) a copy of the consultant's recommendations and conclusions; and
- h) in the event the review determines that modifications to the FMCS are necessary to ensure a safe trip condition, the FMCS Report shall also include a description of the modifications made to each FMCS.

9. This obligation to review and test each unit does not include KCPL's auxiliary boilers and diesel generators. A list of the units that KCPL will review and test is in Attachment "B."

10. The testing will occur, to the extent practicable, in accordance with the schedule that is in Attachment "A."

11. KCPL estimates that it will take three weeks to test the fuel-trip-control logic of the BMS of each power plant boiler, and an additional week to prepare each BMS Report. It will take a similar amount of time to test and report on each CT unit. The testing will be done when the units are shut down for maintenance, as shown in Attachment A, so it will take KCPL approximately seventy-six weeks to complete this review and testing process. In any event, the required testing and reporting will be completed no later than December 31, 2002.

12. KCPL shall review the operating procedures, including maintenance and troubleshooting guides, of all of its power plant boilers and CTs to determine if the procedures need to be modified to ensure a safe-trip condition. KCPL shall provide Staff a

report (OP Report) regarding any deficiencies found in the operating procedures and amendments made to KCPL's operating procedures to correct any deficiencies. If the review indicates that the current procedures are sufficient, that finding shall be included in the report to Staff.

13. KCPL shall submit each BMS Report, FCMS Report, and the OP Report to Staff as each is completed. After all of the Reports are completed, KCPL shall compile a single final report that includes the information from each of the BMS, FCMS and OP Reports and file that final report with the Commission. This shall be completed on or before December 31, 2002.

14. KCPL shall manually isolate any fuel from the power plant boiler or CT whenever a unit is in a shut down condition and work is being performed on the BMS, FCMS and/or fuel trip relays. KCPL shall provide documentation describing how this will be done for each power plant boiler and CT.

15. Staff agrees that KCPL's reporting obligations under this Stipulation and Agreement are not on going and that KCPL's obligations will terminate after KCPL satisfies the reporting obligations required under this Stipulation and Agreement.

16. This Stipulation does not preclude any signatory from challenging the prudence or reasonableness of KCPL's actions related to the Hawthorn 5 boiler explosion in any future proceedings.

17. This Stipulation does not preclude any signatory from challenging the prudence or reasonableness of KCPL's actions related to the Hawthorn 5 boiler explosion in any future proceedings.

WHEREFORE, the signatories request that the Commission approve the instant
Stipulation and Agreement.

Respectfully submitted

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List of Units to be Reviewed and Tested

- | | | |
|-----|--------------|-----------------|
| 1. | Iatan - | Weston, MO |
| 2. | La Cygne 1 | La Cygne, KS |
| 3. | La Cygne 2 | La Cygne, KS |
| 4. | Hawthorn 5 | Kansas City, MO |
| 5. | Hawthorn 6 | Kansas City, MO |
| 6. | Hawthorn 7 | Kansas City, MO |
| 7. | Hawthorn 8 | Kansas City, MO |
| 8. | Hawthorn 9 | Kansas City, MO |
| 9. | Montrose 1 | Clinton, MO |
| 10. | Montrose 2 | Clinton, MO |
| 11. | Montrose 3 | Clinton, MO |
| 12. | Northeast 11 | Kansas City, MO |
| 13. | Northeast 12 | Kansas City, MO |
| 14. | Northeast 13 | Kansas City, MO |
| 15. | Northeast 14 | Kansas City, MO |
| 16. | Northeast 15 | Kansas City, MO |
| 17. | Northeast 16 | Kansas City, MO |
| 18. | Northeast 17 | Kansas City, MO |
| 19. | Northeast 18 | Kansas City, MO |

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RECOMMENDATIONS

Based on the Staff's investigation and review of the incident, Staff recommends the Commission direct that:

1. Kansas City Power & Light Company review and test the fuel trip control logic on all its non-nuclear units and make a determination whether or not there is a possibility that a failure of one device of the control system could put the unit in a hazardous condition. KCPL should produce a report of its findings, including a description of the trip logic for each unit reviewed, and file it in this case.
2. KCPL make the modifications necessary to the control systems of all its non-nuclear units to ensure a safe trip condition of those units. KCPL should produce a report on what modifications were made, and file it in this case.
3. KCPL review the operating procedures of all its non-nuclear units to determine if procedures need to be modified to ensure a safe trip condition of those units. KCPL should make such modifications, and report the changes in a filing in this case.
4. KCPL include a requirement in all specifications for future control work that the designer/contractor of any modifications of the control logic on any non-nuclear unit specifically identify the control logic trip sequence and verify the non-hazardous trip mode. KCPL should include a requirement that all future burner management system designs or modifications be reviewed by

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knowledgeable persons to determine if it meets the latest revision of the National Fire Protection Association Code and Standard for the Prevention of Furnace Explosions/Implosions in Multiple Burner Boiler-Furnaces, before for any future modifications and or replacement of BMS on any non-nuclear unit. KCPL should revise procedures or install equipment at all non-nuclear plants to manually isolate natural gas or any startup fuel from the boiler while any work is being performed on the burner management system, and/or fuel trip relays.

5. KCPL file the above reports, and procedural changes in writing with the Commission within six (6) months.
6. *The Staff review the issue of prudence at the time of the next rate case and/or earnings investigation case.*
7. The Commission issue an Order requiring KCPL to file a response to this Electric Incident Report in this case within 30 days.

Service List For
Case No. ES-99-581
Revised: March 27, 2001 (SW)

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