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February 8, 2001

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Missouri Public Service Commission

RE: Case No. ES-2001-28 – In the Matter of an Incident at St. Joseph Light & Power Company's Lake Road Power Plant on June 7, 2000.

Dear Mr. Roberts:

Enclosed for filing in the above-captioned case are an original and eight (8) conformed copies of a MOTION TO CANCEL PREHEARING CONFERENCE, SUSPEND FILING OF PROCEDURAL SCHEDULE AND FOR ORDER DIRECTING ST. JOSEPH LIGHT & POWER TO PERFORM IN RESPONSE TO THE STAFF'S RECOMMENDATIONS AS IT HAS STATED THAT IT WILL IN ITS RESPONSE TO STAFF RECOMMENDATIONS.

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

Thank you for your attention to this matter.

Nathan Williams

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**Enclosure** 

cc: Counsel of Record

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

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In the Matter of an Inci	dent at St. Joseph	
Light & Power Comp	any's Lake Road	
Power Plant on June 7, 2000.		

Case No. ES-2001-28

## MOTION TO CANCEL PREHEARING CONFERENCE, SUSPEND FILING OF PROCEDURAL SCHEDULE AND FOR ORDER DIRECTING ST. JOSEPH LIGHT & POWER TO PERFORM IN RESPONSE TO THE STAFF'S RECOMMENDATIONS AS IT HAS STATED THAT IT WILL IN ITS RESPONSE TO STAFF RECOMMENDATIONS

COMES NOW the Staff of the Missouri Public Service Commission (Staff) and for its Motion to Cancel Prehearing Conference, Suspend Filing of Procedural Schedule and for Order Directing St. Joseph Light & Power<sup>1</sup> to Perform in Response to the Staff's Recommendations as It has Stated that It Will in its Response to Staff Recommendations states to the Commission as follows:

- 1. The Missouri Public Service Commission (Commission) has the authority to establish a case for the purpose of receiving information from public utilities under its jurisdiction. §§ 393.130.1 and 393.140(1), (2), (3), (5), (9) and (10), RSMo. 2000. At the time this case was established St. Joseph Light & Power Company (SJLP) was an electrical corporation as defined in section § 386.020 (15) RSMo. 2000, and, as such, was a public utility subject to the Commission's jurisdiction pursuant to Chapters 386 and 393 RSMo.
- 2. On July 12, 2000, the Staff of the Missouri Public Service Commission (Staff) filed a motion requesting that the Commission establish a case for the purpose of receiving an incident



<sup>&</sup>lt;sup>1</sup> During this case, on December 29, 2000, St. Joseph Light & Power Company merged into UtiliCorp United Inc. Since the merger, St. Joseph Light & Power Company is a division of UtiliCorp United Inc.

report from the Staff regarding a June 7, 2000, incident at SJLP's Lake Road Power Plant that caused extensive damage to Turbine/Generator #4.

- 3. On July 27, 2000, the Commission issued its order establishing Case No. ES-2001-28 for the purposes of receiving: (1) an incident report from the Staff pertaining to the June 7, 2000, incident at SJLP's Lake Road Power Plant; and (2) the response of SJLP to the Staff's incident report. Additionally, the Commission directed the Staff to file on December 6, 2000, either the Staff's final incident report or an interim incident report.
- 4. On December 6, 2000, the Staff filed its final incident report and moved the Commission to issue an order requiring SJLP to respond to the recommendations made by the Staff in its final incident report.
- 5. On December 12, 2000, the Commission issued its order directing SJLP to file, no later than January 11, 2001, SJLP's response to the recommendations made by the Staff in the Staff's final incident report. The Commission restated the recommendations made by the Staff in its order directing response.
- 6. On December 29, 2001, SJLP merged into UtiliCorp United Inc. becoming a division of the surviving company. UtiliCorp United Inc. is also an electrical corporation as defined in section § 386.020 (15) RSMo. 2000, and, as such, is a public utility subject to the Commission's jurisdiction pursuant to Chapters 386 and 393 RSMo.
- 7. On January 11, 2001, SJLP, as a division of UtiliCorp United Inc., filed with the Commission its response to the Staff's recommendations. The Staff's recommendations and SJLP's response to each follow below along with the Staff's reply to each SJLP response:

Staff Recommendation No. 1: Modify the DC oil pump test procedure to read:

"6. Head Operator should stop the DC oil pump and verify that the control switch returns to the 'Auto' position or place the DCS control for the pump in Auto."

SJLP Response: Prior to returning the TG-4 to service following the incident, the emergency DC lube and seal pump ("DC oil pump") controls were modified to use a hardwired control switch / indicating light control station (in a location recommended by the Lake Road operations department). The distributed control system ("DCS") control station for the DC oil pump was removed. This modification also included enhancements to the AC lube and seal oil pump controls and additional alarms for the lube and seal oil system. Due to this modification, Staff's recommendation to add wording in the test procedure to "place the DCS control for the pump in Auto" is neither necessary nor appropriate.

Staff Reply: The Staff discussed with SJLP's engineers on January 5, 2001, in a conference call the current design of the controls for the DC oil pump and examined revised drawing No. K1 Rev, revised for "as built" conditions. Based on the verbal and written representations of SJLP as well as the aforementioned drawing, the Staff is satisfied that the DCS no longer controls the DC oil pump and, therefore, that Staff Recommendation No. 1 is no longer appropriate.

Staff Recommendation No. 2: Provide operator training on the above procedure.

SJLP Response: Prior to returning TG-4 to service, new operating procedures were prepared and related classroom training was provided to all shift supervisors and affected plant operators to address the lube and seal oil system modifications described above under Recommendation No. 1. Therefore, this recommendation has already been implemented.

Staff Reply: SJLP's response is adequate and acceptable.

Staff Recommendation No. 3: Periodically conduct and document on-site refresher training for operators and shift supervisors for both the DCS and Mark V controls.

SJLP Response: Periodic refresher training for the Unit 4/6 ("TG-4/Boiler 6") DCS and Mark V controls will be provided to the shift supervisors and all operators with direct responsibility for operating the DCS and Mark V equipment. The training will primarily involve classroom instruction, with emphasis on current applicable operating procedures and critical control functions from the operator's perspective. Documentation of the training will be maintained at the Lake Road Plant. The first refresher training for all affected personnel will be completed in 2001.

**Staff Reply:** SJLP's response is adequate and acceptable.

**Staff Recommendation No. 4:** Schedule and perform any system maintenance or troubleshooting that has the potential to trip the turbine only during periods of shutdown or low load demand.

SJLP Response: A utility has the responsibility to maintain equipment availability to serve its customers and to correct equipment problems that might affect that availability. Many times troubleshooting must be done with a generating unit on-line. The decision to perform such work on-line is based on system requirements, economics and the perceived risk of a trip and/or unit damage. It is essential that the utility have the flexibility to address each situation on a case-by-case basis.

Furthermore, it should be understood that tripping, in itself, is not harmful to a generating unit; but, in fact, serves a critical protective role. Units are designed to be tripped (under all potential operating conditions, including full load) in response to the protective systems monitoring their operation. An accidental trip occurring while troubleshooting a unit, in itself, is

no more threatening to the unit's long-term reliability than a trip resulting from a protective relay operation or a turbine-supervisory shutdown. Typically, when an accidental trip occurs (depending on the specific circumstances) the unit can be placed back on-line within a relatively short period of time (perhaps 30 to 60 minutes). Generally, on-line troubleshooting and maintenance work removes operational risk by allowing problems to be identified and/or corrected before they become more serious. The overall net result is a more reliable operation and lower cost.

After discussing this recommendation further with Staff via a telephone conference on January 5, 2001, SJLP learned that Staff's concern with on-line troubleshooting was primarily associated with unit start-ups following outages for major modifications. Staff requested that a comment be made on how this issue might be addressed with the units at the Lake Road Plant.

As SJLP understands the issue, Staff desires to ensure that adequate time is allowed for unit startups following major outages to eliminate the need for on-line troubleshooting and testing during the period immediately after the unit is placed in operation. It is SJLP's opinion that additional time, in and of itself, cannot ensure that on-line troubleshooting and testing will become unnecessary. In fact, many times on-line testing and adjusting of controls are necessary to complete the installation of a new system. On-line tuning of controls is a common example of this.

While SJLP strives to identify and correct problems while a unit is off-line, there are occasions when on-line troubleshooting is necessary. For example, it is occasionally necessary to perform troubleshooting of new controls and other equipment after a unit is put on-line to resolve problems not found during off-line checkout. This can occur regardless of how extensive the off-line preparations and checkout may have been. It should be noted that SJLP would not

knowingly place a unit in operation prematurely such that it would be exposed to undue risk of damage. In any given situation, SJLP has the option of extending the length of an outage to provide more time for start-up and system checkout if it is appropriate.

With all this said, SJLP recognizes that it is still possible to improve the process and provide greater assurance of more problem-free units startups after major outages. SJLP believes the most appropriate approach for accomplishing this is through techniques such as increased sophistication in project management (using computerized methods for scheduling, tracking and pre-operational testing, for example), and refined scope and specification definition for purchased equipment and services.

Staff Reply: The Staff notes that with the merger of SJLP into UtiliCorp United Inc. on December 29, 2000, the number of power generation sources has expanded and, therefore, the impact of an accidental trip on the system as a whole may present less risk than when SJLP was a separate company. In light of the foregoing change in circumstance, the Staff finds SJLP's response to be both adequate and acceptable.

Staff Recommendation No. 5: Develop procedures to include at least one shift supervisor in early planning stages of any modification to the plant.

SJLP Response: SJLP agrees that input from the end-users of a system is helpful in the design process. End-users have generally been consulted for recommendations on all major modifications at Lake Road Plant, particularly where an interface between an operator and a critical control system is a factor. However, SJLP believes it is impractical and inefficient to require that a shift supervisor be included in the planning stages of every modification made at the plant. It is also important to understand that it may not always be prudent or cost-effective to use design recommendations provided by shift supervisors or other end-users. At times, other

considerations dictate how a modification is completed. The general process followed at Lake Road Plant to address this issue is summarized as follows:

The plant operations manager is familiar with the equipment used by operations department personnel and is aware of all plant projects planned and underway at the plant. The plant operations manager provides operations department design input to projects and makes other resources available (such as shift supervisors and/or operators) if it is deemed necessary. Individual project managers are also aware that design input from the operations department may be necessary and consult with the operations manager when work begins on applicable projects. The plant manager provides additional oversight to ensure the process is followed.

SJLP believes the process as summarized above is the most appropriate approach to address Staff's concerns on this issue. SJLP proposes to use this method, with related documentation, on all projects involving critical control systems requiring operator interaction. It should be noted that only a small percentage of projects requiring operations department design input involve critical control systems. Most involve simple logistic or ergonomics issues, such as where to locate a new valve or how to orient its operating handle. It is necessary to limit the projects affected by this procedure to only those involving critical systems. Otherwise, it would be overly burdensome and wasteful.

Staff Reply: SJLP's response is adequate and acceptable.

Staff Recommendation No. 6: Within 180 days:

- A) Identify and review, with supporting documentation, all of the critical control systems used in the operation of its power plants to assure that appropriate redundancies and fail-safe designs are in place;
- B) Document that appropriate personnel are properly trained on the operation of these critical control systems, including backup (i.e., redundant) systems; and
- C) Report, in writing, its activities regarding items A) and B) to the Commission's Electric Department, Engineering Section.

SJLP Response: Due to SJLP transitional issues related to the merger and a busy spring outage schedule for Lake Road Plant, it is not feasible to complete the tasks described in Staff's recommendation within the recommended 180 days. SJLP believes it would be feasible, and allow for more efficient use of plant resources, to undertake the recommended project using a phased approach. Critical control systems for the largest, most-important Lake Road unit (Unit 4/6) would be reviewed first, followed by reviews of other Lake Road units based on their relative importance and projected remaining service life. The following is SJLP's proposal for addressing this recommendation:

- A) SJLP will review, with supporting documentation, the following critical systems associated with Lake Road Unit 4/6 to assure that appropriate redundancies and fail-safe designs are in place:
  - 1. Boiler Burner Management System, including Startup Fuel System
  - 2. Boiler Drum Level Control System
  - 3. Turbine (Mark V) Protective Schemes
  - 4. Generator Protective Relaying
  - 5. Auxiliary / Emergency Power System

- 6. Turbine Water Induction Protection System
- 7. Unit 4/6 Operating Procedures
- 8. DCS Trip Logic
- 9. Unit Fire Protection
- B) SJLP will document that appropriate personnel are properly trained on their respective responsibilities relating to the operation of the critical control systems listed above, including backup (i.e. redundant) systems.
- C) SJLP will prepare a written report of its activities regarding items A) and B) for submission to the Commission's Electric Department, Engineering Section.

SJLP agrees to complete the tasks identified in A), B) and C) above specific to Unit 4/6 within twelve (12) months from the date this proposal is accepted. This time period does not include engineered modifications or upgrade projects SJLP may choose to undertake based on the findings of the review or normal business planning. SJLP also agrees to notify the Commission's Electrical Department, Engineering Section, of the next unit to be reviewed, along with its associated critical control systems, within nine (9) months of the date the proposal is accepted. Review of subsequent units would follow in a similar manner and similar time frame. For each unit reviewed, the tasks identified in A), B) and C) would be performed.

Staff Reply: In light of the merger between SJLP and UtiliCorp United Inc., the Staff finds SJLP's response to be both adequate and acceptable.

8. In its Response to Staff Recommendations SJLP requested that the Commission accept its foregoing responses and proposals.

9. On January 22, 2001, the Commission issued its order scheduling a prehearing conference for 10:00 a.m., February 14, 2001, and directing the parties to file a proposed procedural schedule by February 21, 2001. In its order the Commission stated the following:

SJLP filed its response to Staff's Incident Report and recommendations on January 11. SJLP accepted some of Staff's recommendations but disagreed with others. Staff has not filed a reply to SJLP's response. (Footnote omitted).

Since the parties have not been able to reach an agreement regarding Staff's recommendations, the Commission will direct the parties to submit a proposed procedural schedule leading to a hearing at which all contested issues may be decided. . . .

10. On January 5, 2001, at the request of UtiliCorp United Inc., Staff engineers and company engineers participated in a conference call. Mr. Bill Washburn, P.E., Manager-Electric Department; Dr. Eve Lissik, P.E., Engineering Supervisor; and Mr. Leon Bender, P.E., Engineer, participated for Staff. Mr. Gary Clemens, Manager of Regulatory Services, UtiliCorp United Inc., Mr. John Modlin, P.E., Director Fuels/Projects, Lake Road, and Mr. Mike Smith, P.E., Superintendent of Production Engineering, Lake Road, participated for SJLP/UtiliCorp United Inc. During that call the Staff reached agreement in principle with UtiliCorp United Inc. regarding appropriate responses to the Staff's recommendations in light of various changes in circumstances including SJLP's elimination of the distributed control system as a control station for the DC oil lube and seal pump, and consummation of the merger between SJLP and UtiliCorp United Inc. The Staff has reviewed each of the responses made by SJLP to the Staff's recommendations. The responses appropriately reflect the agreement reached on January 5, 2001, and, as indicated above, the Staff finds them adequate and acceptable.

WHEREFORE, the Staff, having found the responses made by SJLP to the recommendations made by the Staff adequate and acceptable, moves the Commission to: (1) cancel the scheduled pre-hearing conference, (2) suspend filing of the procedural schedule in this

case and (3) enter its order directing SJLP, as a division of UtiliCorp United Inc., to perform as it has stated it will in its Response to Staff Recommendations that it filed with the Commission on January 11, 2001.

Respectfully submitted,

DANA K. JOYCE General Counsel

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## **Certificate of Service**

I hereby certify that copies of the foregoing have been mailed or hand-delivered to all counsel of record as shown on the service list below this 8<sup>th</sup> day of February, 2001.

Service List for Case No. ES-2001-28

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