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Missouri Public Service Commission Exhibit No.:

Issues: Energy Center 3 and 4

Construction Costs; Tree

Trimming Expense

Witness: Paul R. Harrison Sponsoring Party: MoPSC Staff

Type of Exhibit: Direct Testimony Case No.: ER-2006-0315

Date Testimony Prepared: June 23, 2006

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

PAUL R. HARRISON

THE EMPIRE DISTRICT ELELCTRIC COMPANY

CASE NO. ER-2006-0315

Jefferson City, Missouri June 2006

Denotes Highly Confidential Information

NP

STAME Exhibit No. 42NP

Case No(s). 2000 - CSLS

Date 1050 - Rotr 25

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the matter of The Empire District Company of) Joplin, Missouri for authority to file tariffs) Case No. ER-2006-0315 increasing rates for electric service provided to) customers in Missouri service area of the Company.
AFFIDAVIT OF PAUL R. HARRISON
STATE OF MISSOURI)) ss. COUNTY OF COLE)
Paul R. Harrison, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, consisting of pages to be presented in the above case; that the answers in the foregoing Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.
Paul R. Harrison
Subscribed and sworn to before me this day of June 2006. CHAR
TONI M. CHARLTON Notary Public - State of Missouri My Commission Expires December 28, 2008 Cole County Commission #04474301

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DIRECT TESTIMONY OF

PAUL R. HARRISON

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2006-0315

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DIRECT TESTIMONY

OF

PAUL R. HARRISON

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2006-0315

- Q. Please state your name and business address.
- A. Paul R. Harrison, P. O. Box 360, Jefferson City, Missouri 65102.
- Q. By whom are you employed and in what capacity?
- A. I am a Regulatory Auditor for the Missouri Public Service Commission (PSC or Commission).

BACKGROUND OF WITNESS

- Q. Please describe your educational background.
- A. I graduated from Park College, Kansas City, Missouri, where I carned a Bachelor of Science degree in Accounting and Management in July 1995. I also earned an Associate degree in Missile Maintenance Technology from the Community College of the Air Force in June 1990. In addition, I graduated from the Non-Commission Officer (NCO) Leadership School in July 1977, the NCO Academy in March 1983, and the Senior NCO Academy in February 1992. These professional military education schools trained and prepared Non-Commissioned Officers for increased levels of responsibility as Supervisors and Managers in the United State Air Force (USAF).
 - Q. Please describe your work background prior to working at the Commission.

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A. Prior to coming to work at the Commission, I was the manager for Tool Warehouse Inc. for four and one-half years. As the manager, I supervised eight sales representatives and managed merchandise and inventory in excess of \$1.5 million.

Prior to that, I was in the USAF for 23 years. During my career in the USAF, I was assigned to many different duty positions with varying levels of responsibility. I retired from active duty on May 1, 1994, as Superintendent of the 321st Strategic Missile Wing Missile Mechanical Flight. In that capacity, I supervised 95 missile maintenance technicians and managed assets valued in excess of \$50 million.

- O. Please describe your duties while employed by the PSC.
- A. My duties at the Commission include performing audits of the books and records of regulated public utilities under the jurisdiction of the PSC, in conjunction with other Commission Staff (Staff) members. Acting in that capacity, I am also required to prepare testimony and serve as a Staff expert witness on cases involving the accounting issues that I am assigned.
 - Q. Have you previously filed testimony before this Commission?
- A. Yes. Schedule 1 lists the cases in which I filed testimony, the issues that I have worked and the small informal cases that I have completed.

PURPOSE OF TESTIMONY

- Q. Did you make an examination and analysis of the books and records of The Empire District Electric Company (Empire) in regard to matters raised in this case?
- A. Yes, in conjunction with other members of the Staff. I specifically examined information provided by the Company in response to Staff data requests, portions of the

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Company's general ledger, as well as workpapers supplied by Empire. I also examined Empire's Annual Reports and other information filed at the Commission.

- Q. What adjustments are you sponsoring?
- A. I am sponsoring the following adjustments:

Plant in Service EC3&4

P-38.1, P-41.1, P-38.2 and P41.2

Depreciation Reserve EC3&4

R-38.1, R-41.1, R-38.2 and R-41.2

Tree Trimming

S-48.1 and S-61.1

- What knowledge, skill, experience, training or education do you have in these Q. matters?
- A. I have performed duties as a Regulatory Auditor within the Auditing Department at the Commission since January 18, 2000. In addition to acquiring general knowledge of these topics through my education, I've acquired experience in prior rate cases before the Commission as well as through formal and informal training.
 - Please describe the formal training for your position that you have received. Q.
- A. I attended the National Association Regulatory Utilities Commissioner's (NARUC) Water Rate School in San Diego, California, in May 2000. I also attended NARUC's "On the Missouri" 2003 seminar conducted in Jefferson City, Missouri, in January 2003.
 - Q. Please describe the informal training for your position that you have received.
- I have successfully completed each of my assigned issues, as listed in A. Schedule 1, and have had the opportunity to interact with other auditors concerning these and other issues that involved the Commission's Auditing Department.

I have attended in-house training classes, reviewed Auditing Department position papers, training manuals, and technical manuals pertaining to the accounting issues in this and other cases.

I have reviewed the Commission's report and orders, testimony, and transcripts of cases filed by Empire and other utilities within the jurisdiction of this Commission.

EXECUTIVE SUMMARY

- Q. What is the purpose of your testimony?
- A. This testimony addresses the Staff's position and adjustments concerning Empire's Energy Center units 3 and 4 construction costs (EC3&4) and its transmission and distribution vegetation control (tree trimming) costs.
 - Q. Please summarize your testimony.
- A. Empire's EC3&4 plant was constructed and became fully operational in April 2003. In Empire's last rate case (Case No. ER-2004-0570), the Staff proposed a disallowance of a portion of the costs associated with the installation of EC3&4. This disallowance of \$3,155,356 was based upon the Staff's opinion that the Company acted imprudently by exposing Empire to an unnecessary level of financial risk. This unnecessary financial risk resulted from Empire's decision to not enforce its contract provision that required the contractor for EC3&4, Patch Construction L.L.C. (Patch), to obtain a performance bond within 21 days after signing the contract. In this case, the Staff is proposing the same disallowance because the full amount of the Patch construction costs are included in Empire's rate base, which it seeks to reflect in customer rates for this case.

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The Staff's tree trimming expense adjustment addresses the normalized level of transmission and distribution tree trimming expense that it proposes to be included in rates for this case.

ENERGY CENTER UNITS 3 AND 4 CONSTRUCTION COSTS

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Q. Please describe the system that was installed at EC3&4 and became

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operational in April 2003.

two new generating units, a control center, Reverse Osmosis (RO) building installed at EC3&4 at a total cost of \$55,807,026. The two new units that were installed are aero-derivative combustion turbines with a nominal output of 50 MW each. An aero-derivative turbine is based on a design very similar to the engines on a large jet. Each unit consists of two of these engines, which turn one generator. The aero-derivative type units are able to withstand the stress of starting and stopping better than larger combustion turbines.

Q. What is the purpose of your direct testimony concerning EC3&4?

A. The purpose of my testimony concerning EC3&4 is to present background information concerning the Staff's review of the Company's construction costs for its EC3&4 units, which it seeks to reflect in customer rates for this case. This review began in Empire's last rate case, Case No. ER-2004-0570. In that case, the Staff proposed a disallowance of a portion of the costs associated with the installation of EC3&4. It was the Staff's opinion that the Company acted imprudently by exposing Empire to an unnecessary level of financial risk. This unnecessary financial risk resulted from Empire's decision to not enforce its contract provision that required the contractor, Patch Construction L.L.C. (Patch), to obtain a performance bond within 21 days after signing the contract. Patch filed for

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bankruptcy protection during its construction of the EC3&4 and was unable to finish the project. As a result, Empire's decision resulted in the additional unnecessary costs to complete the construction of EC3&4, which the Company sought to recover from its customers in that rate case.

During negotiations between the Company and the Staff in that case, a settlement was reached for the amount of construction overrun costs that would be included in rate base.

- Q. If these costs are not addressed in this case, what will the impact be for Empire's rate payers?
- A. The entire amount of Patch's construction overrun costs will be included in rate base. Therefore, the rates that are determined in this case will reflect the full amount of these costs.
- Q. How did the Staff update its review of the EC3&4 construction costs from Empire's last rate case to this rate case?
- A. The Staff set up a meeting with Empire to discuss EC3&4 construction costs, scheduled a tour of EC3&4 and submitted additional data requests that asked the Company to update its responses to the Staff's previous data requests concerning this issue that were submitted in Case No. ER-2004-0570, as appropriate. The Company responded to this request by stating that there had been no changes to the data request responses from the last case, and that the answers given then were still appropriate.
- Q. Have the construction and installation costs for EC3&4 changed since the previous case (Case No. ER-2004-570)?
- A. Yes, the original construction and installation costs for EC3&4 in Case No. ER-2004-0570 were established at \$55,220,300. The construction and installation

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costs for EC3&4 for this case amount to \$55,807,026 which is an increase of approximately \$586,726. The reason for this increase is that Allowance of Funds During Construction (AFUDC) amount had not yet been booked by the Company for EC3&4 during the last case.

- Q. Was there an unnecessary risk associated with Empire's decision to hire Patch in February of 2002?
- A. No. Patch was hired for the installation of the two FT-8 gas turbines and Balance of Plant (BOP) for EC3&4. When Empire decided to contract with Patch, the Company appropriately covered its financial risk that Patch would "fail to perform" through the contractual requirement by requiring Patch to acquire a "performance bond." However, Empire made the decision not to enforce this contractual requirement and exposed itself to the financial risk associated with cost over-runs when the contractor failed to perform.
- Q. Please discuss the original safeguard Empire incorporated into its contract with Patch to address this risk.
- As discussed and explained in the testimony of Staff witness David W. Elliot, of the Energy Department, Patch was required to obtain a performance bond within 21 business days of the signing of the original contract. (See Schedule 3.) This performance bond would have provided a safeguard for Empire against the financial risk discussed above, by reimbursing Empire for the additional cost incurred due to the failure of Patch to complete the installation of EC3&4 at the contract price. (See Schedule 4.) By not enforcing this requirement, Empire exposed itself to increased financial risk and potential increase in cost. This contract requirement was important because Empire had evidence in its possession that Patch might fail to perform under the contract. The Company had this evidence prior to the signing of the original contract with Patch on February 15, 2002.

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Q. Please discuss the information that was available to Empire, prior to the signing of the original contract, relating to the risk associated with hiring Patch.

In response to Staff Data Request No. 429 in Case No. ER-2004-0570, the A. provided two memorandums dated August 17, 2004, written by Company Mr. Blake Mertens, Empire's Planning Engineer-Energy Supply. These memorandums were based on notes compiled by Mr. Mertens during telephone interviews he conducted on January 11, 2002, with representatives of Lockport Cogeneration (Lockport) and Puget Sound Energy (PSE), previous clients of Patch, for purposes of obtaining a background and reference check on the contractor.

- Q. What experience did Lockport have with Patch?
- Lockport's experience with Patch's work was very limited since only the A. foundation construction was completed prior to the entire project being suspended.
 - Was Lockport satisfied with Patch? Q.
 - A. Yes.
 - Q. What experience did PSE have with Patch?
- A. Attached as Schedule 2 to this testimony is the memorandum summarizing PSE's experiences. **

Schedule 5), whereby Patch Construction L.L.C., Patch Inc., Chester J. Patch, III and Patricia M. Patch became personally liable for any unapproved costs above the original contract amount. (See Schedule 6 attached to this testimony.) Empire and Patch signed this amendment on July 22, 2002.

- Q. Did this amendment satisfactorily reduce Empire's exposure to the potential increase in cost and financial risk that resulted from the Company's failure to enforce the contract provision requiring Patch to obtain a performance bond?
- A. No. This amendment's protection is dependent on the financial strength of the individuals and entities that assumed liability for non-performance. Patch was required to submit financial statements to Empire as a condition of approval prior to the signing of Amendment 1. The Company provided copies of these financial statements to the Staff in response to Staff Data Request No. 425 in Case No. ER-2004-0570. These financial statements contain sufficient evidence of Patch's financial difficulties that existed prior to the signing of Amendment 1. The proposed amendment to the contract did not satisfactorily address Empire's exposure to the increased financial risk that resulted from the Company not enforcing the contract provision requiring Patch to obtain a performance bond.
- Q. Were Chester J. Patch, III and Patricia M. Patch, as well as the companies they controlled, ultimately able to provide sufficient funds to cover any personal liability for failure to perform?
- A. No. In fact, Patch Inc. and Patch Construction L.L.C. filed for bankruptcy simultaneously on November 11, 2003. Chester J. Patch, III and Patricia M. Patch filed for bankruptcy on June 2, 2004. The court relieved Patch Inc. and Patch Construction L.L.C. of their debt owed to Empire as of August 1, 2004. Additionally, court documents from the

bankruptcy proceeding reveal that Chester J. Patch, III and Patricia M. Patch did not have sufficient assets to pay the liability owed to Empire.

- Q. What additional costs were incurred by Empire as a result of its imprudence?
- A. Staff witness Elliott has identified \$4,321,356 as the total company amount of additional cost incurred by Empire to complete the installation of EC3&4 as a result of Patch's failure to perform. This is the maximum amount that could be considered for a disallowance as a result of Empire's imprudence.
- Q. Is the Staff proposing to disallow the entire \$4,321,356 of cost overruns associated with this issue?
- A. No. Before it made the decision to hire Patch, Empire had narrowed its consideration of contractors to two bidders, Patch and Sega. Based on Empire's evaluation of the bid proposals, the elimination of Patch from consideration would have resulted in Sega being awarded the contract to install EC3&4. However, since Sega's bid was \$1,166,000 higher than Patch's, Empire would have incurred this additional amount for the installation of EC3&4. Therefore, the Staff is recommending a total company disallowance of \$3,155,356 (\$4,321,356 \$1,166,000).
 - Q. What accounts has the Staff adjusted to eliminate this cost overrun?
- A. The Staff reduced plant in service accounts 341.000 (Structures and Improvements), and 344.000 (Generators) evenly by \$1,577,678 (total Company) in plant adjustments P-38.1 and P-41.1, respectively. The Staff has made a related adjustment to adjust the depreciation expense which has accumulated on the plant disallowance amount. Both depreciation reserve accounts 341.000 and 344.000 were decreased by \$33,499 in reserve adjustments R-38.1 and R-41.1, respectively. Furthermore, the Staff made

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adjustments to the AFUDC portion of plant and depreciation reserve related to the disallowance. The AFUDC portion of plant was decreased by \$33,526 and the accumulated depreciation reserve was decreased by \$711 for both accounts 341,000 and 344,000 in plant adjustments P-38.2 and P-41.2, and reserve adjustments R-38.2 and R-42.2, respectively.

TREE TRIMMING EXPENSE

- Q. What is the purpose of your testimony concerning transmission and distribution vegetation control costs (tree trimming)?
- Α. The purpose of my testimony is to discuss and reflect the Staff's normalized level of transmission and distribution tree trimming expense that should be included in the test year. Empire has included approximately \$5,350,689 for tree trimming expense in their rate case filing. \$2,095,192 of these costs are associated with transmission and distribution maintenance expense. The Staff removed the costs associated with maintenance expense from its analysis of tree trimming expense, and chose to analyze that amount as part of the Company's maintenance expense. The transmission and distribution maintenance expense analysis is being performed by Staff Auditing witness Kofi Boateng for this case.
 - Q. Has the Company recently made changes to its tree trimming program?
- A. In July 2005, the Company made extensive changes to their tree trimming program. The changes were primarily related to distribution vegetation control, but refinements to their transmission trimming program were also made. These changes include how the work is planned, how it is performed and the reimbursement costs of Empire's contractors. They have also changed their primary vegetation control contractor and retained an outside consultant to assist in the planning of their vegetation control projects.

Q. What level of tree trimming expense did the Staff include in Empire's rate case?

A. The Staff's adjustment annualized the Company's tree trimming expense to reflect the current costs associated with Empire's implemented changes that began in July 2005. The Company's tree trimming expense for the test year was \$3,814,971. However, since the Company could only provide the Staff with six months of tree trimming data under the new program, the Staff used this amount to annualize the total cost over a period of one year. Based upon this analysis, the annualized tree trimming expense for the test year is \$4,118,782. The Staff believes this represents a reasonable level of ongoing tree trimming expense for Empire.

- Q. Does this conclude your direct testimony?
- A. Yes it does.

CASE PROCEEDING/PARTICIPATION

PAUL R. HARRISON

COMPANY	CASE NO.	TESTIMONY/ISSUES
Missouri Gas Energy	GR-2006-0422	Case in Progress
		Direct—Revenues; Purchased Gas Adjustments; Bad Debt Expense; Pensions & OPEBS; Income Taxes and Case Reconciliation
Empire Electric Company	ER-2006-0315	Case in Progress
		Direct- Tree Trimming Expense; Storm Damage Tracker and Construction Over-Run Costs
Missouri Pipeline &	GC-2006-0378	Case in Progress
Missouri Gas Company LLC		Plant in Service, Depreciation Reserve, Depreciation Expense, Acquisition Costs and Income Taxes
New Florence Telephone	TC-2006-0184	Case in Progress
		Plant in Service; Depreciation Reserve; Depreciation Expense; Plant Overage; and Materials & Supplies
Cass County	TC-2005-0357	May 2006
Telephone		Plant in Service; Depreciation Reserve; Depreciation Expense; Plant Overage; Plant Held for Future Use and Missouri Universal Service Fund
Cass County Telephone & New Florence Telephone	TO-2005-0237	May 2006
Fraud Investigation Case		Fraud Investigation case involving Cass County Telephone and New Florence Telephone
Missouri Gas Energy	GR-2004-0209	June 2004
		Surrebuttal - Revenues and Bad Debt Expense
		True-Up - Revenues; Bad Debt Expense

COMPANY	CASE NO.	TESTIMONY/ISSUES
Missouri Gas Energy	GR-2004-0209	Litigated- Manufactured Gas Plant May 2004 Rebuttal - Revenues; Bad Debt Expense; and Manufactured Gas Plant
Missouri Gas Energy	GR-2004-0209	April 2004 Direct – Revenues; Purchased Gas Adjustments; Bad Debt Expense; Medical Expense; Rents; and Income Taxes
Union Electric Company d/b/a AmerenUE (Gas)	GR-2003-0517	October 2003 Direct – Corporate Allocations; UEC Missouri Gas Allocations; CILCORP Allocations; Rent Expense; Maintenance of General Plant Expense; Lease Agreements; and Employee Relocation Expense
Union Electric Company d/b/a AmerenUE	EC-2002-1	June 2002 Surrebuttal - Coal Inventory; Venice Power Plant Fire; Tree Trimming Expense; and Automated Meter Reading Service
Laclede Gas Company	GR-2002-356	June 2002 Direct - Payroll; Payroll Taxes; 401k Pension Plan; Health Care Expenses; Pension Plan Trustee Fees; and Clearing Account: True- Up - Payroll; Payroll Taxes; and Clearing Accounts
Union Electric Company d/b/a AmerenUE (2 nd period, 3 rd EARP)	EC-2002-1025	April 2002 Direct - Revenue Requirement Run; Plant in Service; Depreciation Reserve; Other Rate Base items; Venice Power Plant Fire expenditures; Tree Trimming Expense; and Coal Inventory

COMPANY	CASE NO.	TESTIMONY/ISSUES
2 nd Complaint Case, Union Electric Company d/b/a AmerenUE	EC-2002-1	Deposition - April 11, 2002 March 2002
New Test Year ordered by the Commission.		Direct - Materials and Supplies; Prepayments; Fuel Inventory; Customer Advances for Construction; Customer Deposits; Plant in Service; Depreciation Reserve; Venice Power Plant Fire Expenditures; Tree-Trimming Expense; Automated Meter Reading Expense; Customer Deposit Interest Expense; Year 2000 Computer Modification Expense; Regulatory Advisor's Consulting Fees; and Property Taxes
1 st Complaint Case, Union Electric Company d/b/a AmerenUE	EC-2002-1	Deposition – November 27 2001 July 2001
		Direct - Materials and Supplies; Prepayments; Fuel Inventory; Customer Advances for Construction; Customer Deposits; Plant in Service; Depreciation Reserve; Power Plant Maintenance Expense; Tree-Trimming Expense; Automated Meter Reading Expense; Customer Deposit Interest Expense; Year 2000 Computer Modification Expense; Computer Software Expense; Regulatory Advisor's Consulting Fees; Board of Directors Advisor's Fees and Property Taxes.
Union Electric Company d/b/a AmerenUE (2 nd period, 2 nd EARP)	EC-2001-431	February 2001 Coal Inventory
Union Electric Company d/b/a AmerenUE (Gas)	GR-2000-512	August 2000 Direct - Cash Working Capital; Advertising Expense; Missouri PSC Assessment; Dues and Donations; Automated Meter Reading Expenses; Computer System Software Expenses (CSS); Computer System Software Expenses (Y2K); Computer System Software Expenses (EMPRV); Generation Strategy Project Expenses; Regulatory Advisor's Consulting fees; Board of Directors Advisor's fees

COMPANY	CASE NO.	TESTIMONY/ISSUES	
SUMMARY OF SMALL RATE CASES WORKED			
Aqua Missouri Water and Sewer	QS-2005-0008 QW-2005-009 QS-2005-0010 QW-2005-0011	In Progress Plant In Service; Depreciation Reserve, Depreciation Expense, Rate Base; Revenues and Expenses Lead Auditor	
Lake Region Water and Sewer Certificate Case	WA-2005-0463	In Progress Certificate of Necessitate Application Case Lead Auditor	
Tri-State Utility Inc.	WA-2006-0241	May 2006 Certificate of Necessitate Application Case Lead Auditor	
Osage Water Company Environmental Utilities Missouri American Water	WO-2005-0086	February 2005 Rate Base; Cost of Service; Income Statement Items; Pre-Post Sale of OWC, Sale of EU Assets to MAWC	
North Suburban Water & Sewer	WF-2005-0164	December 2004 Sale of All Stocks of Lake Region Water & Sewer to North Suburban Water & Sewer, Value of Rate Base Assets, Acquisition Premium Lead Auditor	
Roark Water and Sewer	WR-2005-0153 SR-2005-0154	September 2004 Plant In Service: Rate Base: Revenues: and Expenses. 2 nd Update September 2004 1 st Update October 2003 Filed February 2003 Lead Auditor	

COMPANY	CASE NO.	TESTIMONY/ISSUES
Mill Creek Sewer	SR-2005-0116	December 2004
		Plant In Service: Rate Base: Revenues: and Expenses. 2 nd update December 2004 1 st update September 2003 Filled October 2002
		Lead Auditor
Osage Water Company	WT-2003-0583 SR-2003-0584	December 2003 Cost of Service; All Expenses related to Osage Water; Plant in Service; Depreciation Reserve & other Rate Base Items

SUMMARY OF NON-CASE RELATED AUDITS

January 2006 – Environmental Utilities and Osage Water Company Audit Concerning Provision of Service to Eagle Woods Subdivision and Disconnect Notice

November 2004 - Internal Audit of Public Service Commission (PSC) Fixed Assets, Physical Inventory Control Process and Location of Assets

SCHEDULE 2

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already performed, upon the failure of Owner to make an undisputed payment to Contractor within thirty (30) days of the date such payment was due, by so notifying Owner in writing seven (7) Business Days in advance. Disputes will be handled according to Exhibit F.

5.5 Contractor shall procure a performance bond within twenty-one (21) business days after the execution of the Agreement and provide Owner evidence in the form of Exhibit G.

ARTICLE 6 START-UP AND TESTING

6.1. Mechanical Completion.

- 8.1.1 Contractor shall perform the Work so that Mechanical Completion shall occur not later than the Scheduled Mechanical Completion Date. Contractor shall, whenever it has cause to anticipate any delay in or impediment to proper and timely performance of the Work on its part, promptly notify Owner in writing and Contractor shall take reasonable steps, in accordance with this Agreement, to alleviate or mitigate such effects.
- 6.1.2 Contractor shall provide written notice to Owner that Contractor deems the Work to meet the requirements of Mechanical Completion. Within ten (10) Business Days after receiving notice of Mechanical Completion, Owner shall advise Contractor in writing of any known defects or deficiencies in the Project or discrepancies between installed Equipment, Bulk Materials and Supplies and as represented by the Specifications and Drawings, Contractor shall then take appropriate corrective action and again notify Owner in writing that the Project has achieved Mechanical Completion. Owner shall have three (3) Business Days after such notification to advise Contractor of any remaining known defects, deficiencies and discrepancies. If Owner fails to notify Contractor of any such known defects, deficiencies or discrepancies within the allocated time, the Project shall be deemed to have achieved Mechanical Completion.
- 6.1.3 If due to the fault of Owner or Owner's representatives, Mechanical Completion is not accomplished within thirty (30) days of the Schedule Mechanical Completion Date, Contractor shall be entitled to reimbursement of all expenses incurred for the demobilization and remobilization on a cost plus fifteen (15%) percent basis.
- 6.2 <u>Performance Tests</u>. As soon as practical after Mechanical Completion, Contractor shall conduct the Performance and Emission Tests (as described in Section 9 of Exhibit D) to ensure CEMS meets EPA standards and requirements and that emission limits are met as described in Revised Exhibit 4 (dated January 30, 2002) of Exhibit D

ARTICLE 13 ASSIGNMENT

- Assignment. Except as set forth in this Article 13.1 no interest in this Agreement shall, in whole or in part, be assigned or encumbered by either party without the prior written consent of the other party, which consent shall not be unreasonably withheld. Owner shall have the right to assign this Agreement in whole or in part to (i) an entity established to own, operate and to obtain funds for the construction and operation of the Project, and (ii) the Lender. Any such assignment shall not relieve the assigning party of any obligation under this Agreement. Upon the assignment of this Agreement to a Lender, Contractor shall, at the request of Owner, enter into a consent agreement with Lender pursuant to the terms of Article 19.7.
- 13.2 <u>Succession</u>. This Agreement shall inure to the benefit of and be binding upon the successor and permitted assigns (as provided for by Article 13.1) of the parties. Owner agrees that any assignees or transferee of its interest or any portion thereof in this Agreement or in the Project, including any lienholder or party holding a security interest with respect thereto will be bound by the releases and limitations of liability set forth in this Agreement such that the total aggregate liability of Contractor to Owner and such assignees or transferee shall not in the aggregate exceed the limits of liability set forth in this Agreement.

ARTICLE 14 SUBCONTRACTORS AND LABOR RELATIONS

- 14.1 <u>Subcontractors</u> Contractor shall have the right to enter into purchase orders for the provision of Equipment, Start-up Spare Parts, Bulk Materials and Supplies, and to subcontract a portion of the Work. The issuance of any purchase order or subcontract shall not relieve Contractor of any of its obligations under this Agreement, including, but not limited to, the obligation to properly supervise and coordinate the tasks of Subcontractors and Vendors so as to ensure that all tasks performed by Subcontractors and Vendors conform to the standards set forth in this Agreement.
- 14.2 <u>Labor Relations.</u> Contractor shall promptly undertake all reasonable efforts to resolve any labor disputes among its employees. If a labor disturbance occurs, Contractor shall take all reasonable actions to minimize any resulting disruption of the progress of the Work. Contractor shall advise Owner promptly in writing of any known actual or anticipated or threatened labor dispute that might affect the performance of the Work.

ARTICLE 15 SUSPENSION AND TERMINATION

15.1 Right of Owner to Suspend Work.

15.1.1 Owner may suspend the performance of the Work by Contractor, in whole or in part at any time and from time to time upon thirty (30) days' prior written notice of such suspension. The notice of suspension shall state the reason for suspension and the articipated term of suspension. Thereafter, Contractor shall resume performance of the Work when directed to do so upon reasonable notice by Owner. Notice of suspension does not relieve Owner from making payments for milestone events already completed at the time of suspension or milestones scheduled for completion within thirty (30) days of the notice of suspension

- 15.1.2 In the event of suspension of the performance of the Work at Owner's request, Contractor shall be entitled to a reimbursement of direct and indirect expenses and costs which were incurred by Contractor as a result of the suspension plus ten (10%) percent. Such expenses and costs shall include, but not be limited to, the costs of stopping the Work, preparing the Equipment, Construction Equipment, Start-up Spare Parts, Supplies and Bulk Materials for storage, moving such items to a storage facility, the cost of storage and insurance, cost increase in material and labor incurred during the suspension period, costs of removing such items from storage and transportation back to the manufacturing facility or Project Site, and costs of restarting the Work. The Scheduled Mechanical Completion Date and all other dates by which Contractor's responsibilities are measured shall be equitably adjusted to reflect any delays resulting from such suspension.
- 15.1.3 In the event suspensions by the Owner pursuant to Article 15.1.1 in the aggregate exceed ninety (90) days. Contractor may terminate its obligations under the Agreement by so notifying Owner in writing and the provisions of this Article 15.1 shall apply to such termination as if the termination were made by Owner without cause under Article 15.2.
- Termination. Owner may reminate the Work with or without cause at any time by giving thirty (30) days written notice of termination to Contractor. Owner may terminate Contractor for cause should Contractor commit a material breach of or default under this Agreement, abandon the Project, make an assignment for the benefit of creditors, admit in writing its inability to pay its debts as they become due, file a voluntary petition in bankruptcy, be adjudicated as bankrupt or insolvent, file a petition or answer seeking for itself any reorganization, arrangement, composition, readjustment, liquidation, dissolution, or similar relief under any present or future statute, law or regulation, file any answer admitting or not contesting the material allegations of a petition filed against Contractor in any such proceeding, or seek, consent to or acquiesce in, the appointment of any trustee, receiver, custodian or liquidator of Contractor or of all or any substantial part of the properties of Contractor, or if Contractor, its directors or shareholders take action to dissolve or liquidate Contractor, In the case of a termination for material breach of or default under this Agreement, Owner may not terminate this Agreement for cause if after notice of such breach or default which identifies in detail the acts or omissions of Contractor causing such breach or default and prior to expiration of the thirty (30) day period set forth abovs, Contractor has commenced and is diligently pursuing efforts to cure such breach or default.
- without cause. Owner shall pay to Contractor a pro rata portion of the Agreement Price consistent with the Project Schedule up to thirty (30) days following the date of notice of termination, plus any costs directly or indirectly attributable to, and reasonably incurred in terminating the Work, including, without limitation, cancellation charges owed to third parties. Contractor shall provide Owner with invoices of all such costs. In the event of termination as provided in Article 15,2 for cause, Owner shall pay to Contractor for a pro rata portion of the Agreement Price consistent with the Project Schedule up to the date of notice of termination but Owner shall have no obligation to make such payment to Contractor until the amount of Owner's offset rights for any reasonable and necessary expenses incurred by Owner to complete the Project under substantially similar terms and conditions are agreed upon by Owner and Contractor. Upon termination, Contractor shall deliver to Owner possession of the Work in its then condition, including without limitation all Drawings and Specifications, contracts with Vendors and Subcontractors, all other documentation associated with the Project. In the event of

termination neither party shall be liable to the other except to the extent obligations, by their terms, expressly survive termination.

- 15.4 <u>Assumption of Obligations</u>. In the event of termination, Owner shall assume and become liable for any written obligations and commitments that Contractor may have undertaken with Vendors and Subcontractors in connection with the Work, and any other obligations Owner chooses to assume which are by law or by their terms assumable by Owner and are not covered by the payments made to Contractor under Article 15.3. Such obligations include, without limitation, any leases or rentals of Construction Equipment utilized in connection with construction of the Work. Contractor shall execute all papers and take all other reasonable steps requested by Owner which may be required to vest in Owner all rights, setoffs, benefits and titles necessary to such assumption by Owner of such obligations described in this Article 15.4. Owner agrees to indemnify and hold Contractor harmless against any liability under any obligations assumed by Owner pursuant to this Article 15.4 arising after the assumption by Owner
- event shall the maximum liability under this Agreement of Contractor, its corporate affiliates, and their employees, agents, partners, officers and directors (referred to as the "Released Parties") to Owner, its partners, Lender, their affiliates, employees, agents, partners, officers and directors (referred to as the "Released Parties") with respect to all claims, including those of third parties, however caused, arising out of the performance or non-performance of the Work and obligations under this Agreement, whether based in contract, warranty, tort (including negligence), strict liability, or otherwise, including without limitation, liability for liquidated damages, pursuant to Article 6 exceed in the cumulative aggregate the sum of five (5%) percent of the Agreement Price and the Releasing Parties hereby release, indemnify and hold harmless the Released Parties from any excess liability. No claim shall be asserted against the Released Parties unless the injury, loss or damage giving rise to the Claim is sustained prior to the expiration of one (1) year from the date of Mechanical Completion.
- 15.6 <u>Liability Limitation for Empire District Electric Company.</u> Notwithstanding anything in this Agreement to the contrary, in no event shall the maximum liability under this Agreement of Owner, its corporate affiliates, and their employees, agents, partners, officers and directors (referred to as the "Released Parties") to Contractor, its partners, Lender, their affiliates, employees, agents, partners, officers and directors (referred to as the "Releasing Parties") with respect to all claims, including those of third parties, however caused, arising out of the performance or non-performance of the Work and obligations under this Agreement, whether based in contract, warranty, tort (including negligence), strict liability, or otherwise, including without limitation, liability for liquidated damages, pursuant to Article 6 exceed in the cumulative aggregate the sum of five (5%) percent of the Agreement Price and the Releasing Parties hereby release, indemnify and hold hamiless the Released Parties from any excess liability. No claim shall be asserted against the Released Parties unless the injury, loss or damage giving rise to the Claim is sustained prior to the expiration of one (1) year from the date of Mechanical Completion.
- 15.7 <u>Consequential Damages</u>. The Released Parties shall not be liable to the Releasing Parties for incidental, indirect, punitive, exemptary, special or consequential loss or damage, including, but not limited to loss of use, loss of profit, loss of revenue, loss by reason of plant shutdown or inability to operate at rated capacity, increased costs of purchasing or providing the Equipment or other materials, supplies or services, debt service, rental payments or contractual damages incurred by Owner to others, resulting from any cause whatsoever,

Including but not limited to any delay, act, error or omission of Contractor, whether or not involving the sole or concurrent fault or negligence of Contractor.

Exclusivity. The remedies described in Articles 6.1.4, 6.3.1 and 5.3.2, subject to the limitation of liability specified in Article 15.5, shall constitute Owner's sole and exclusive remedies for liabilities of Contractor arising from the failure of Contractor to achieve Mechanical Completion by the Scheduled Mechanical Completion Date and failure of the Project to meet the Performance Guarantees

ARTICLE 16 FORCE MAJEURE

Events Constituting Force Majeure, Force Majeure means the occurrence of any event or circumstance or combination of any event or circumstance beyond the reasonable control of either party which materially and adversely affects the ability of either party to perform its obligations under the Agreement, Neither party shall be excused from timely payment of any amounts due under this Agreement due to an event of Force Majeure.

Without limiting the generality of the foregoing, events constituting Force Majeure shall include, but not be limited to the following events and circumstances to the extent they satisfy the above requirements:

- Acts of war, terrerism, hostilities (whether war be declared or not), invasion, act (a) of foreign enemies.
- (b) The making or changing of any statute, ordinance, order, law, regulation or bylaw by any branch of the government or any political subdivision thereof which has the effect of prohibiting or rendering unlawful the performance of the Agreement.
- Rebellion, revolution, insurrection, military or usurped power or civil war. (¢)
- (b) Riot, civil commotion or disorder.
- (e) Epidemic or plaque.
- Any material effect of the natural elements, including lightning, fire, earthquake, **(f)** flood, storm, blizzards, hail, cyclone, typhoon, or tornado
- Strikes, works to rule or go slows which are either widespread, nationwide, (g) regional or local or of a political nature.
- Change, denial, delay or failure to renew licenses or permits required for the (h) Project.
- (1) Subsurface or latent physical conditions at the Project Site.
- (1) Detays or accidents in transportation (including delays in customs).
- Partial or entire delays or failures in the provision of any necessary utilities at the (K) Project Site.

EXHIBIT G

PERFORMANCE BOND

KNOW ALL MEN BY THESE P	RESENTS that we, the undersigned
	of PATCH CONSTRUCTION LLC, hereinafter
referred to as "Contractor", and	
a corporation organized under the law	s of the state of and authorized to
transact business in the states of Miss	sourl and Kansas as "Surety," are held and firmly bound
	RIC COMPANY, hereinafter referred to as "Owner," in the
penal sum of	US DOLLARS
(USS), lawful mone	US DOLLARS by of the United States of America, for the payment of
which sum, well and truly to be made to	o the Owner, we bind ourselves and our heirs, executors,
administrators, successors, and assign	s, jointly and severally, by these presents:
written Agreement with the Owner furnished by the Owner, construction to necessary labor, for and in connect designated, defined, and described in	2002, the Contractor entered into a for furnishing materials, supplies, and equipment not tools, equipment, and plant, and the performance of all ction with the construction of certain improvements the said Agreement and the conditions thereof, and in uments therefor; a copy of the said Agreement being I, and
WHEREAS, it was a condition o	f the Agreement award by the Owner that these presents

NOW THEREFORE, if the said Contractor shall, in all particulars, well, duty, and faithfully observe, perform, and abide by each and every covenant, condition, and part of the said Agreement, and the conditions, specifications, guarantees (including those of equipment performance), drawings, and other Agreement documents thereto attached or, by reference,

made a part thereof, according to the true intent and meaning in each case, then this obligation shall be null and void; otherwise, it shall remain in full force and effect, and

be executed by the Contractor and Surety;

PROVIDED, that in the event the Contractor shall be in default under the Agreement or the Agreement shall be terminated by the Owner under the provisions of the Agreement, the Surety shall promptly remedy the default or shall promptly (1) complete the Agreement in accordance with its terms and conditions, or (2) arrange for a contract between the Owner and a mutually acceptable contractor to complete the original contract in accordance with its terms and conditions; and in the event the Surety does not commence performance within thirty (30) days after notice of default or termination, the Owner may take over and prosecute the work to completion by Agreement or otherwise and the Surety shall pay to the Owner the cost of completion less the unpaid balance of the Agreement price. (The "unpaid balance of the Agreement price isss the amount paid to the Contractor under the terms of the Agreement.)

PROVIDED FURTHER, that if the Contractor shall fail to pay all just claims and demands by, or in behalf of, any employee or other person, or any firm, association, or corporation, for labor performed or materials, supplies or equipment furnished, used or consumed by the Contractor or his, their or its subcontractor or subcontractors in the performance of the work, then the Surety will pay the full value of all such claims or demands in

any total amount not exceeding the amount of this obligation, together with interest as provided by law.

THE UNDERSIGNED SURETY, for value received, hereby agrees that no extension of time, change in, addition to, or other modification of the terms of the Agreement or work to be performed thereunder, or of the specifications or other Agreement document, shall in any way affect its obligation on this bond, and the Surety does hereby waive notice of any such extension of time, change, addition, or modification.

day of	, 2002.		on this
		my reference on a constitution of the American	(Contractor)
		Ву:	
		·*···	(Surety Company)
		Ву:	
			(Attorney-in-Fact)
		Ву:	
			(State Representative)

AGREEMENT FOR INSTALLATION OF TWO FT-8 TWIN PAC'S

AND ENGINEERING, PROCUREMENT

AND CONSTRUCTION OF BOP EQUIPMENT NEAR SARCOXIE, MISSOURI

By and Between

THE EMPIRE DISTRICT ELECTRIC COMPANY

And

PATCH CONSTRUCTION LLC AND PATCH INC.

AMENDMENT - 01

week. As these costs are prepared on a weekly estimated basis, each request for payment will be supported with documents for the preceding week and the payment request reconciled as necessary.

- 5.4 <u>Payment of Change Order Price:</u> The payment of Change Orders shall be made by Owner in accordance with the provisions of the Change Orders approved by Owner.
- 5.5 <u>Interest:</u> Any portion of the Agreement Price not paid by Owner when due in accordance with this Article 5 may incur Interest charges from the Suppliers. Any such additional costs caused solely by delay of Owner, including Contractor's costs resulting from late payments shall be to the Owner's account. Any such additional costs caused by delay of Contractor, shall be to the Contractor's account. Provided Contractor is not in default under the Agreement or this amendment, any portion of the Agreement Price due directly to the Contractor and not paid by Owner when due in accordance with this Article 5 shall bear interest from the date payment was due to the date of payment at a rate per annum equal to the lesser of the maximum lawful rate or the prime rate as then published by Bank of America in Houston, Texas plus three (3%) percent.
- 5.6 Contractor's Right for Non-Payment by Owner: Not withstanding the provisions of Article 5.5 above, and provided Contractor is not in default of it's obligations under the Agreement or this amendment, Contractor shall have the right to terminate this agreement in its entirety, and to be released from any liability except with respect to its warranty obligations for Work already performed, upon the failure of Owner to make an undisputed payment to Contractor within thirty (30) days of the date such payment was due, by so notifying owner in writing seven (7) Business Days in advance. Disputes will be handled according to Exhibit F.

A1.2 Exhibit B: Payment Terms and Values

Exhibit B: Payment Terms and Values is deleted in its entirety and replaced with the following provisions:

Attached as Exhibit 1 is Contractor's Project Cost Report as of the date of this Amendment 01, disclosing in full the Original Budget, Current Budget, Current Commitments and the Forecast to Complete.

- The latest Cost Report referred to above contains the forecast costs at Project completion based on actual order values and quantity take-offs at over 80% Engineering completion. The economies achieved by Contractor have enabled Contractor to create a First Tier Contingency (FTC) in the amount of \$915,258.
- Contractor hereby assigns the First Tier Contingency to Owner's control. This contingency will be re-allocated to and from estimated areas of the project to maintain the project budget at \$10,450,124 or less. (\$11,365,382 \$915,258). Contractor shall not be required to provide a Performance Bond.
- 4. The Cost Report also defines Contractor's originally planned Overhead, Profit and Contingency. The Original Budget for Profit and Contingency was \$1,067,011. This amount shall be defined as the Second Tier Contingency. Owner has in effect paid this amount as part of the Notice to Proceed payment of \$1,136,000. Should the First Tier Contingency be exhausted, Contractor shall reimburse Owner for all costs above \$10,450,124 within seven (7) working days, provided such costs have been invoiced to Owner by Contractor and provided Owner has paid the invoiced amounts.
- 5. Should both the First and Second Tier Contingency's be exhausted (i.e. the cost of the project exceeds \$11,365,382) then Contractor will make assets from Patch LLC, Patch Inc, and the personal assets of Mr. C J Patch III, PE available as collateral to insure completion of the project at the contracted value of \$11,365,382 pursuant to Exhibit M.
- 6. Unused First Tier Contingency will be allocated as follows: In recognition of the Owner's increased accounting and administrative functions, the first \$60,000 of remaining First Tier contingency will be retained by the Owner. The remaining First Tier contingency is payable by Owner to Contractor progressively as noted below:

Event	Anticipated Date	% FTC
Mechanical Completion of Unit 3	11-Feb-03	25%
Mechanical Completion of Unit 4	26-Feb-03	25%
Achieve Commercial Operation Unit 3	01-Apr-03	25%
Achieve Commercial Operation Unit 4	15-Apr-03	25%

Owner shall release to Contractor the payments as referred to above for achieving Commercial Operation by the dates specified, irrespective of whether Commercial Operation had been achieved or not, provided however, any delay to achieving Commercial Operation is not in whole or in part attributable to any deficiency in the work performed by Contractor, and provided that Contractor is in not in breach of the Agreement or this amendment and all lien waiver releases have been provided by owner.

A1.3 EXHIBIT C: PROJECT SCHEDULE

The Project Schedule, Run Date 05 Feb 02 is replaced with a new Schedule, Run Date 19 July 02, reflecting Owner's request to bring forward Unit 4 completion.

A1.4 EXHIBIT E: CONTRACTOR'S PARTIAL RELEASE OF CLAIMS

Contractor confirms receipt of payments from Owner in the sum of \$3,442,774 (Three million, four hundred forty two thousand, seven hundred seventy four), through the invoice dated June 7, 2002, covering all work performed up to and including May 31, 2002, and further confirms that Contractor has satisfactorily fulfilled his obligations with respect to Exhibit E: CONTRACTOR'S PARTIAL RELEASE OF CLAIMS for all payments made to date. The provisions of the Exhibit E referenced herein shall apply as described in section A 1.1 (5.3.3) described above.

A1.5 EXHIBIT G: PERFORMANCE BOND

Exhibit G: PERFORMANCE BOND, to the Agreements deleted in its entirety, pursuant to section A1.2 above.

- A1.6 Contractor has furnished Owner with the following Financial Statements and the Owner has reviewed the same and Owner's requirements, resulting from this review, are incorporated in this AMENDMENT-01:
 - Operating Statement for Patch LLC
 - Operating Statement for Patch Inc
 - Personal Statement for Mr. C J Patch III, PE

A1.7 EXHIBIT H: EXAMINATION OF RECORDS

IN WITNESS WHEREOF, the parties have caused this AMENDMENT 01 to "The ENGINEERING, PROCUREMENT AND CONSTRUCTION AGREEMENT™ made and entered into February 15, 2002 by and between The Empire District Electric Company ("Owner") and Patch Construction LLC ("Contractor) to be executed as of the date first above written:

CON	TRA	CT	OR

OWNER

Patch Construction L.L.C.

The Empire District Electric Company

By: Cof. Vatel By: Bud Beecher

Printed Name: C.J. PATONI Printed Name: BRAD BEECHER

Title: PRESIDENT Title: UP ENERGY SUPPLY

CONTRACTOR

Patch Inc.

Printed Name: C.J. PATCH III

Title: PRESIDENT

EXHIBIT M

GUARANTY AGREEMENT

DATE AND PARTIES. The date of this Guaranty Agreement ("Guaranty") is _______ [date of amendment), and the parties are as follows:

Name	Street Address, City, State, Zip of Residence or Registered Agent Address in Missouri	SSN or Tax ID #
C. J. Patch, III, Individually	5310 GCENNERE LN SPENG, TX 77379	034-30-6785
[PATICINA 1 PATCAL], Individually [spouse's name]	SSID GLEWHERE LAS SPRING, TX 77379	021-34-5101
Patch, Inc., a [[EZAS] corporation [state of incorporation]	3663 N. SAM HOUSEN PENCY BACT SUITE 300 Housen, TX 77132	760513353
Patch Construction, L.L.C., a [[EXAS] limited liability company [state of organization]	7286 PEPERMUL PRLY B. CHAYLESTON, SC 29418	760655399

[GUARANTORS] (Collectively)

The Empire District Electric Company, a Kansas corporation 602 Joplin St Joplin MO 64801 [HOLDER]

1. AGREEMENT TO GUARANTEE.

- A. To induce HOLDER to enter into an amendment to that certain Engineering, Procurement and Construction Agreement dated February 15, 2002 (the "Agreement"), GUARANTORS, jointly and severally, absolutely and unconditionally, promise to perform in accordance with the Obligations (as hereinafter defined) under this Guaranty, the Agreement, and the Amendment and to pay and guarantee prompt remittance of all payments to be made by Contractor under the Agreement and the Amendment to any third party supplier of labor, materials and services, or any other payment due by Contractor under the Agreement and the Amendment. Upon full performance by GUARANTORS of all of their respective obligations hereunder, this Guaranty, the Agreement, and the Amendment shall terminate.
- B. The term "Obligations" shall mean: (i) the obligations of GUARANTORS under this Guaranty; (ii) the obligations of GUARANTORS under the Agreement or under the Amendment; (iii) all existing and future indebtedness, liabilities, and obligations of GUARANTORS to HOLDER.
- C. GUARANTORS, jointly and severally, absolutely and unconditionally, guarantee and promise unto HOLDER that they will faithfully perform and fulfill all of their covenants under the Agreement and the Amendment and the Obligations at the time and in the manner provided for therein.
- D. GUARANTORS, jointly and severally, absolutely and unconditionally, further promise and guarantee prompt payment when due of all attorney fees, including paralegal fees, and all other costs and expenses incurred by HOLDER in enforcing HOLDER's rights under this Guaranty, the Agreement, and the Amendment.
- PRIMARY LIABILITY. GUARANTORS are primarily liable under this Guaranty; regardless of whether or not HOLDER pursues
 any of its remedies under the Agreement or the Amendment or against any other surety, guaranter or endorcer under said
 Agreement or Amendment.

Course, Course a complete. Foliograph a sample processor

- NO OTHER CONDITIONS. The liability of GUARANTORS is not conditioned on the signing of this Guaranty by any other
 person and further is not subject to any condition not expressly set forth herein.
- 4. EVENTS OF DEFAULT. GUARANTORS shall be in default upon the occurrence of any of the following events, circumstances or conditions:
 - A. Failure by any person or entity obligated to make payment on behalf of Contractor under the Agreement or the Amendment.
 - B. A default or breach under any of the terms of this Guaranty, the Agreement or the Amendment.
 - C. The reasonable determination by HOLDER that any warranty, covenant, representation or statement made herein or in the Agreement or Amendment to induce HOLDER to enter into this Guaranty, the Agreement, and the Amendment, and all other documents executed in conjunction therewith, if any, and to accept this Guaranty, prove to be false when made or furnished.
 - D. Entry of a decree or order for relief by a court having jurisdiction of the premises in respect of any of GUARANTORS, or any guarantor or surety of them, in any involuntary case under Federal Bankruptcy Laws, as now or hereafter constituted, or any other applicable federal or state bankruptcy, insolvency or similar law, or the appointing of a receiver, a liquidator, assignee, custodian or other similar office of any of GUARANTORS, or any guarantor or surety of them, or for a substantial part of their property, or the ordering or winding up liquidation of affairs and the continuance of any such decree or order unstayed in effect for a period of sixty (60) days.
 - E. Commencement by any of GUARANTORS or by any guarantor or surety of them of a voluntary case under Federal Bankruptcy Laws, as now constituted or hereafter amended, or any other applicable federal or state bankruptcy, insolvency or similar law, or the consent by any of them to the appointment of or taking into possession by a receiver, a liquidator, assignee, custodian or other similar official of GUARANTORS or any guarantor or surety of them, or for a substantial part of their property, or the making by them or by any guarantor or surety of them of any assignment for the benefit of creditors, or the failure of any of them generally to pay their debts as such debts become due or the taking of any action by any of them or any guarantor or surety of them in furtherance of any of the foregoing.
 - F. Dissolution, termination of existence, or business failure of PATCH CONSTRUCTION, L.L.C. or PATCH, INC.
 - G. If any guaranty of the Agreement or the Amendment shall at any time, for any reason, cease to be in full force and effect or shall be declared to be null and void by a court of competent jurisdiction, or if the validity or enforceability thereof shall be contested or denied by any party thereto, or if any party thereto shall deny that he, she or it has any further liability or obligation thereunder, or if any party thereto shall fail to comply with or observe any of the terms, provisions or conditions contained in any such guaranty.
 - H. A transfer of a substantial part of any of GUARANTORS' money, property, or business interests, except in the ordinary course of business.
- 5. REMEDIES ON DEFAULT. At the option of HOLDER, all or any part of the Obligations under this Guaranty, the Agreement, or the Amendment, shall become immediately due and payable without notice or demand, upon the occurrence of an Event of Toefault or at any time thereafter. In addition, upon the occurrence of any Event of Default, HOLDER, at its option, may immediately invoke any or all other remedies provided in this Guaranty, the Agreement, or the Amendment, or any other instrument evidencing the Obligations, and any documents securing or otherwise relating to the Obligations. All rights and remedies are cumulative and not exclusive and HOLDER is entitled to all remedies provided by law or equity, whether or not expressly set forth.
- WAIVER AND CONSENT BY GUARANTORS AND OTHER SIGNERS. Regarding this Guaranty, the Agreement, and the Amendment, to the extent not prohibited by law, GUARANTORS and any other signers;
 - A. Consent to any waiver granted by HOLDER and agree that any delay or tack of diligence in the enforcement of the Obligations or any failure to file a claim or otherwise protect any of the Obligations in no way affects or impairs GUARANTORS' liability.
 - 8. Waive notice of acceptance hereof, notice of any action taken or omitted by HOLDER in reliance thereon, any requirement that HOLDER give notice of default or asserting any other right of HOLDER hereunder.
 - C. Waive protest, presentment for payment, demand, notice of acceleration, notice of intent to accelerate and notice of distioner.

- Consent to any renewals and extensions agreed to by HOLDER, regardless of the number of such renewals or extensions;
- E. Consent to HOLDER's release of any endorser, guarantor, surety, accommodation or any other co-signer.

BANKRUPTCY,

- A. If a bankruptcy petition should at any time be filed by or against the GUARANTORS, the maturity of the Obligations, so far as GUARANTORS' liability is concerned, shall be accelerated and the Obligations shall be immediately payable by GUARANTORS.
- B. GUARANTORS acknowledge and agree that this Guaranty shall remain in full force and effect at all times, notwithstanding any action or undertakings by or against HOLDER in connection with any obligation in any proceeding in the U.S. Bankruptcy Courts, including without limitation, election of remedies or imposition of any status upon claims by HOLDER, pursuant to the U.S. Bankruptcy Code, as amended.
- C. In the event that any payment under this Guaranty is deemed, by final order of a court of competent jurisdiction, to have been a voidable preference under the bankruptcy or insolvency laws of the United States or otherwise, then GUARANTORS' obligation shall remain as an obligation to HOLDER and shall not be considered as having been extinguished.
- RELIANCE BY HOLDER. GUARANTORS acknowledge that HOLDER is relying on this Guaranty in entering into the Agreement and Amendment and that GUARANTORS have signed this Guaranty to induce HOLDER to enter into said Agreement and Amendment.
- 9. JOINT AND SEVERAL. GUARANTORS and all other guarantors, endorsers, co-signers, and sureties shall be jointly and severally liable under this Guaranty, the Agreement, and the Amendment. This Guaranty shall be in addition to any other guaranty or other security for the Obligations of HOLDER under the Agreement and the Amendment, which shall not be prejudiced or rendered unenforceable by the invalidity of any such other guaranty or security.

10. GENERAL PROVISIONS.

- A. FINANCIAL STATEMENTS. Until such time as the Obligations and payments due under the Agreement and the Amendment are performed and paid in full, GUARANTORS shall furnish HOLDER with such audited and unaudited balance sheets, income statements and financial statements as HOLDER may from time to time request, all of which financial statements shall be certified by GUARANTORS or GUARANTORS' accountants to be true, correct and complete.
- 8. TIME IS OF THE ESSENCE. Time is of the essence in GUARANTORS' performance of all duties and Obligations imposed by this Guaranty.
- C. NO WAIVER BY HOLDER OR GUARANTORS. HOLDER's course of dealing, or HOLDER's forbearance from, or delay in, the exercise of any of HOLDER's rights, remedies, privileges or right to insist upon GUARANTORS' strict performance of any provisions contained in this Guaranty, the Agreement, or the Amendment, shall not be construed as a waiver by HOLDER, unless any such waiver is in writing and is signed by HOLDER.
- D. AMENDMENT. The provisions contained in this Guaranty may not be amended, except through a written amendment which is signed by HOLDER and GUARANTORS.
- E. INTEGRATION CLAUSE. This Guaranty and the Amendment to the Agreement, executed concurrently herewith, represent the entire understanding of the parties hereto as to the Obligations, whether prior, contemporaneous or subsequent, and may not be contradicted by evidence of prior, contemporaneous, or subsequent oral agreements of the parties.
- F. GOVERNING LAW. This Guaranty shall be governed by the laws of the State of Missouri, regardless of that state's conflict of laws provisions, and provided that such laws are not otherwise preempted by federal laws and regulations.
- 6. FORUM AND VENUE. In the event of litigation pertaining to this Guaranty, the exclusive forum, venue and place of jurisdiction shall be in the State of Missouri, County of Jasper, unless otherwise required by law.
- H. SUCCESSORS AND LIABILITY OF GUARANTORS. This Guaranty shall inure to the benefit of and bind the heirs, personal representatives, successors, assigns of the parties and subsequent holders of the Obligations and the Hule:

provided however, that GUARANTORS may not assign, transfer or delegate any of its rights or Obligations under this Guaranty.

- I. NUMBER AND GENDER. Whenever used, the singular shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.
- DEFINITIONS. The terms used in this Guaranty, if not defined herein, shall have their meanings as defined in the
 other documents executed contemporaneously, or in conjunction, with this Guaranty.
- K. PARAGRAPH HEADINGS. The headings at the beginning of any paragraph, or any subparagraph, in this Guaranty Agreement are for convenience only and shall not be dispositive in interpreting or construing this Guaranty Agreement.
- L. IF HELD UNENFORCEABLE. If any provision of this Guaranty shall be held unenforceable or void, then such provision to the extent not otherwise limited by law shall be severable from the remaining provisions and shall in no way affect the enforceability of the remaining provisions nor the validity of this Guaranty. This Guaranty is valid despite the genuineness, validity or enforceability of any documents executed in conjunction with the transaction described in Section 2 hereof.
- M. NO LEGAL EXISTENCE. If for any reason PATCH CONSTRUCTION, L.L.C. or PATCH, INC. has no legal existence or is under no legal obligation to discharge any of its responsibility undertaken in the Agreement or purported to be undertaken by it or on its behalf, this Guarunty shall nevertheless be binding on GUARANTORS to the same extent as if GUARANTORS at all times had been principal parties obligated to perform under the terms and conditions of the Guaranty and the Agreement.

ORAL AGREEMENTS OR COMMITMENTS TO LOAN MONEY, EXTEND CREDIT, OR TO FORBEAR FROM ENFORCING REPAYMENT OF A DEBT INCLUDING PROMISES TO EXTEND OR RENEW SUCH DEBT ARE NOT ENFORCEABLE. TO PROTECT YOU (GUARANTORS) AND US (HOLDERS) FROM MISUNDERSTANDING OR DISAPPOINTMENT, ANY AGREEMENTS WE REACH COVERING SUCH MATTERS ARE CONTAINED IN THIS WRITING, WHICH IS THE COMPLETE AND EXCLUSIVE STATEMENT OF THE AGREEMENT BETWEEN US, EXCEPT AS WE MAY LATER AGREE IN WRITING TO MODIFY IT.

[SIGNATURES TO FOLLOW ON NEXT PAGE]

ENERGY CENTER

IN WITHESS WHEREOF, the unumnigned have account this instrument, upon proper authority, as of the date first above written.

CAPATCH, TIL, THOIVEDUALLY 07/22/02

Parent of Threat I THEN TOWNEY, HE WIFE

ATTESTE

paten, inc.

ETCHATURE OF ESCRUTARY

PATRICIA H. PHICH

PRINTED NAME

INSHATURE OF PRESIDENT

C. J. PATCH TIE

PHINTED HAME

PATCH CONSTRUCTION, L.L.C.

TOHATURE OF MANAGENG HENDER

PREMITED NAME

GUARANTORS

THE WALL PROPERTY AND PARTY.