



## CITY OF SPRINGFIELD JOB DESCRIPTION

<b>JOB TITLE:</b>	Plant Maintenance Electrician	<b>DATE:</b>	December 18, 2014
<b>DEPT/DIV:</b>	CWLP/Electric Generation/Maintenance	<b>LOCATION:</b>	Generating Station
<b>SUPERVISOR:</b>	Electric Maintenance Supervisor and Service and Job Foreman	<b>STATUS:</b>	IBEW Local #193
<b>POSITIONS SUPERVISED:</b>	Apprentices		

**JOB SUMMARY:** Under general supervision, performs corrective and preventive maintenance of the generating station's electrical equipment.

### JOB DUTIES AND ACCOUNTABILITIES:

<b>E/M</b>	<b>Description</b>	<b>% Time</b>
E	1. Troubleshoots control circuits.	20
E	2. Troubleshoots and works in close proximity to energized and de-energized electrical equipment that includes use of high and low voltage test equipment with voltage ranges of 20 KV to 120 volts AC and DC.	20
E	3. Repairs and maintains motor control centers, programmable controllers, S.C.R. motor drives and various other electrical and electronic equipment.	15
E	4. Repairs AC and DC motors and motor starters.	10
M	5. Installs conduit, wiring and electrical equipment.	10
E	6. Repairs and maintains HVAC equipment.	10
E	7. Maintains and repairs high, medium and low voltage transformers.	5
E	8. Maintains and repairs medium and low voltage switchgear and associated cabling and buss.	5
M	9. Performs other duties as assigned by supervisor.	5

### EQUIPMENT, AIDS, AND TOOLS:

Hand tools, power tools, air tools, conduit benders, hydraulic presses and benders, jack hammers, core drill, hammer drill and hammers of various sizes, chain hoists, test equipment (volt-OHM meters, digital multi-meters, MEGOHM-meter, high potential tester, phase test set, transformer oil tester, turns ratio tester, Amp probes, circuit tracers, recording volt meters, ammeters and ground sets), backhoe, boom truck, cherry picker, arc welders, gas welding and cutting sets, compressed air sprayers, safety lines, safety harnesses and special climbing belts, communication equipment such as two-way radios and gai-tronics, and proper use of safety equipment.

**REGULAR CONTACTS:**

Electrical Maintenance Supervisor, Service and Job Foreman, Supervisor of Generation, and other craft, engineering, technician, and clerical employees as needed.

**WORKING CONDITIONS:**

Must maintain safe work environment for self and co-workers as outlined in the CWLP Safety Manual.

Work is performed in a dusty environment.

Work is performed in an environment that may cause allergic reactions.

Work is performed in extreme heat and cold at designated times.

Must wear designated safety equipment, provided by CWLP (includes but not limited to hard hat, safety glasses, safety shoes, gloves, goggles, respirators, dust masks, special containment suits, hoods, safety belts, and safety harnesses).

Work is performed with and around various lubricating oils, cleaning solvents, compounds, compressed air and compressed gases (CO2, Nitrogen, Freon).

Will be subject to both inside and outside environmental conditions.

**KNOWLEDGE, SKILLS, AND ABILITIES:**

Working knowledge of AC and DC semi-conductor theory.

Ability to effectively read and understand electrical schematics.

Past exposure to relay logic and electronic troubleshooting to board level.

Ability to effectively troubleshoot various control circuits.

Ability to operate heavy equipment such as a backhoe, boom truck, cherry picker, man lift, and various types of cranes.

Ability to operate electric arc welding machines and gas welding and cutting equipment.

Ability to effectively read, understand and interpret detailed technical manuals and apply this knowledge in the performance of job duties.

Strong mechanical aptitude.

Ability to maintain effective working relationships.

Ability to understand, interpret and follow technical and non-technical oral and written instructions.

Ability to adhere to department rules, procedures and policies.

Ability to communicate effectively with department personnel.

Ability to function independently.

Ability to maintain awareness of the environment and conditions at the job site.

**PHYSICAL REQUIREMENTS:**

Ability to pass a pulmonary exam and wear a respirator.

Ability to work in high places (on ladders, scaffolding, grating, man lifts that may require the use of safety belts and harnesses).

Ability to work in hazardous confined spaces that may require the use of breathing apparatus and full suit-up to prevent health risk exposure.

Ability to lift loads and exert forces up to 100 pounds for extended periods.

Ability to distinguish colors (must not be color blind).

Ability to perform a significant amount of stooping, kneeling, crouching, reaching, standing, walking, balancing, fingering, and grasping.

Ability to perform a moderate amount of climbing, crawling, pushing, pulling and lifting.

Ability to access all areas of the generating facility.

Visual ability to perform detailed close work/work within arm's reach.

**TRAINING AND EXPERIENCE/MENTAL REQUIREMENTS:**

Requires knowledge, skill and mental development equivalent to the completion of a high school diploma or GED, completion of a minimum four-year apprenticeship program in the electrical field or equivalent, and a minimum of three years experience at the Journeyman Electrician level on power plant or similar equipment with troubleshooting and repair experience on programmable logic controllers, various control circuits, HVAC

equipment, transformers, speed controls, and motors and motor control circuits. Requires experience with installation and check out of various electrical equipment and associated conduit and wiring; bending and installing conduit; pulling, terminating and splicing cable; and rigging (cables and slings) for lifting and moving equipment and motors with various type cranes and hoists.

# **ADDITIONAL REQUIREMENTS:**

Requires a valid Class D driver's license.

Must be able to obtain and maintain first aid and CPR certificate, provided by CWLP.

Must meet the current requirements of the Labor Agreement between Local Union No. 193, International Brotherhood of Electrical Workers and City of Springfield.

**FLSA STATUS:**      **Exempt** ☐    **Non-exempt** ☒

Y	N	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. The employee customarily and regularly directs the work of at least two other employees.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2. The employee makes recommendations as to hiring, firing, promotion, or disciplinary action of other employees.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. The employee plans and apportions work, monitors performance, and determines techniques/resources to be used by other employees.
If all of (1), (2), and (3) are checked "yes", the position is exempt. Otherwise, continue with remaining questions.		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. The employee customarily and regularly exercises discretion and independent judgment.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. The employee devotes less than 20% of his/her workweek to non-exempt duties (e.g., typing, data entry, posting accounts, etc.).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. The employee performs under only general supervision, and/or works along specialized or technical lines requiring specialized training, experience, or knowledge.;
If all of (4), (5), and (6) are checked "yes", the position is exempt.		

**Supervisor Approval:** 

**Date:** 1/5/15

**Director Approval:** 

**Date:** 1/5/15

**Human Resources Approval:** 

**Date:** 1/12/2015

## POSITION ATTRIBUTE WORKSHEET

**JOB TITLE:** Plant Maintenance Electrician

### 1. PHYSICAL ACTIVITY

	ATTRIBUTE	DUTIES	% Time
A.	<b>CLIMBING:</b> Ascending or descending ladders, stairs, scaffolding, ramps, poles, etc., using feet and legs and/or hands and arms. Body agility is emphasized. Important if the amount and kind of climbing exceeds that required for ordinary locomotion.	1,4,5,6,7,8,9	15
B.	<b>BALANCING:</b> Maintaining body equilibrium to prevent falling when walking, standing, or crouching. Important if the amount and kind of balancing exceeds that needed for ordinary locomotion and maintenance of body equilibrium.	1-9	50
C.	<b>STOOPING:</b> Bending body downward and forward by bending spine at the waist. Important if it occurs to a considerable degree and requires full use of the lower extremities and back muscles.	1-9	75
D.	<b>KNEELING:</b> Bending legs at knee to come to a rest on knee or knees.	1-9	50
E.	<b>CROUCHING:</b> Bending the body downward and forward by bending leg and forward bending leg and spine.	1-9	50
F.	<b>CRAWLING:</b> Moving about on hands and knees or hands and feet.	6,7,8,9	10
G.	<b>REACHING:</b> Extending hand(s) and arm(s) in any direction.	1-9	100
H.	<b>STANDING:</b> Particularly for sustained periods of time.	1-9	75
I.	<b>WALKING:</b> Moving about on feet to accomplish tasks, particularly for long distances.	1-9	75
J.	<b>PUSHING:</b> Using upper extremities to press with steady force in order to thrust forward, downward or outward.	2,4,5,6,8,9	25
K.	<b>PULLING:</b> Using upper extremities to exert force in order to draw, drag, haul or tug objects in a sustained motion.	2,4,5,6,8,9	25
L.	<b>LIFTING:</b> Raising objects from a lower to a higher position or moving objects horizontally from position to position. Important if it occurs to a considerable degree and requires substantial use of the upper extremities and back muscles.	2,3,4,5,6,7,8,9	25
M.	<b>FINGERING:</b> Picking, pinching, typing or otherwise working, primarily with the fingers rather than with the whole hand or arm as in handling.	1-9	75
N.	<b>GRASPING:</b> Applying pressure to an object with the fingers and palm.	1-9	100
O.	<b>FEELING:</b> Perceiving attributes of objects, such as size, shape, temperature or texture by touching with skin, particularly that of the fingertips	1,2,4,5,6,9	10
P.	<b>TALKING:</b> Expressing or exchanging ideas by means of the spoken word; conveying detailed or important spoken instructions to other worker accurately, loudly, or quickly.	1-9	50
Q.	<b>HEARING:</b> Perceiving the nature of sounds, with or without correction; receiving detailed information through oral communication, making fine discriminations in sound.	1-9	100
R.	<b>REPETITIVE MOTIONS:</b> Substantial movements of the wrists, hands, and/or fingers.	1-9	10

## 2. PHYSICAL MODE – SELECT ONE

	ATTRIBUTE	LEVEL
A.	<b>SEDENTARY WORK:</b> Exerting up to 10 pounds of force occasionally and/or a negligible amount of force frequently or constantly to lift, carry, push, pull or otherwise move objects, including the human body. Sedentary work involves sitting most of the time.	<input type="checkbox"/>
B.	<b>LIGHT WORK:</b> Exerting up to 20 pounds of force occasionally, and/or up to 10 pounds of force frequently, and/or negligible amount of force constantly to move objects. Use of arm and/or leg controls with exertion greater than Sedentary Work and the worker sits most of the time.	<input type="checkbox"/>
C.	<b>MEDIUM WORK:</b> Exerting up to 50 pounds of force occasionally, and/or up to 20 pounds of force constantly to move objects.	<input type="checkbox"/>
D.	<b>HEAVY WORK:</b> Exerting up to 100 pounds of force occasionally, and/or up to 50 pounds of force constantly to move objects.	<input checked="" type="checkbox"/>
E.	<b>VERY HEAVY WORK:</b> Exerting <i>in excess</i> of 100 pounds of force occasionally, and/or in excess of 50 pounds of force frequently, and/or in excess of 20 pounds of force constantly to move objects.	<input type="checkbox"/>

## 3. VISUAL REQUIREMENT – SELECT ONE

	ATTRIBUTE	LEVEL
A.	Level A is typical of <b>CLERICAL, ADMINISTRATIVE, MACHINE OPERATION, CLOSE ASSEMBLY, INSPECTION:</b> Minimum standard for those preparing and analyzing data and figures, such as transcription, computer terminal, extensive reading, visual inspection involving small defects, small parts, operation of machines, (including inspection), using measurement devices, assembly or fabrication of parts at distances close to the eyes.	<input type="checkbox"/>
B.	Level B is typical of <b>MACHINE OPERATORS</b> (without inspection), <b>MECHANICS, SKILLED TRADESPEOPLE:</b> Minimum standard for those working with machines such as lathes, drill presses, power saws and mills where the seeing job is at or within arm's reach and those who do work of a non-repetitive nature such as carpenters, technicians, service people, plumbers, painters, mechanics, etc.	<input checked="" type="checkbox"/>
C.	Level C is typical of <b>MOBILE EQUIPMENT OPERATORS:</b> Minimum standard for those who operate cars, trucks, forklifts, cranes, and high lift equipment.	<input type="checkbox"/>
D.	<b>OTHER:</b> Minimum based on the criteria of accuracy and neatness of work for janitors, sweepers, etc.	<input type="checkbox"/>

## 4. MENTAL CAPABILITY REQUIREMENTS – SELECT ONE

	ATTRIBUTE	LEVEL
A.	Performs repetitive tasks following simple instructions.	<input type="checkbox"/>
B.	Performs a variety of simple tasks following instructions provided.	<input type="checkbox"/>
C.	Performs tasks requiring independent knowledge in addition to procedures or instructions provided.	<input checked="" type="checkbox"/>
D.	Performs complex tasks requiring independent knowledge and its application to non-routine situations.	<input type="checkbox"/>
E.	Performs highly complex and varied tasks requiring independent knowledge, its application to a variety of situations, as well as exercise of independent judgment.	<input type="checkbox"/>

**5. WORKING CONDITIONS – CHECK ALL THAT APPLY**

ATTRIBUTE	ITEM
A. Subject to inside environmental conditions; protected from weather conditions, some temperature changes.	<input checked="" type="checkbox"/>
B. Subject to outside environmental conditions.	<input checked="" type="checkbox"/>
C. Subject to both inside and outside environmental conditions.	<input checked="" type="checkbox"/>
D. Subject to extreme cold; temperature below 32 degrees for periods of more than one hour.	<input checked="" type="checkbox"/>
E. Subject to extreme heat: temperatures above 100 degrees for periods of more than one hour. Note if seasonal or process related.	<input checked="" type="checkbox"/>
F. Subject to noise sufficient to cause the worker to shout in order to be heard.	<input checked="" type="checkbox"/>
G. Subject to vibration of the extremities or whole body.	<input checked="" type="checkbox"/>
H. Subject to hazards such as proximity to moving parts, electrical current, working on scaffolding and high places, or exposure to chemicals.	<input checked="" type="checkbox"/>
I. Subject to conditions that affect the respiratory system or the skin such as fumes, odors, dusts, mists, gases or poor ventilation.	<input checked="" type="checkbox"/>
J. Subject to oils or other cutting fluids.	<input checked="" type="checkbox"/>
K. Required to wear respirator.	<input checked="" type="checkbox"/>
L. Not substantially exposed to adverse environmental conditions (such as in typical office or administrative work).	<input type="checkbox"/>

**6. COMMENTS/NOTES**