	<h2>Job Description</h2>	
Business Area: Asset & Operations	Instrumentation, Controls, and Electrical (IC & E) Technician (Level 1)	Page 1 of 6
L1 - ADM - 1JD – IC1 - R	Revision Date: March 23, 2009	Approved By:

Job Summary (Why does job exist?)

The IC&E Technician (Level 1) is responsible for all electrical, instrument, and control activities of the plant. The position reports directly to the Instrumentation & Controls Supervisor. The IC&E Technician (Level 1) is responsible for troubleshooting, testing, maintenance, calibration, and proper operation of all instrumentation, control systems (specifically Siemens SPPA-T3000 with Automation server (S7-400-4H) , and Turbine control system (SIMATIC FM 458), switchgear, batteries and electrical support systems, and electrical equipment in the plant. The IC&E Technician (Level 1) will serve as the custodian of the Continuous Emissions Monitoring System (CEMS) and be responsible for all maintenance, troubleshooting, and calibration of emissions monitoring equipment. The IC&E Technician (Level 1) will possess an intimate knowledge of the Data Acquisition and Handling System (DAHS) and be responsible for the maintaining the database of organized environmental monitoring parameter detail in accordance with all applicable permit requirements and assist in the reporting process as directed. Support start up and commissioning and operations for the Longview 700 MW Super Critical Coal Fired Generating Station.

ESSENTIAL DUTIES AND RESPONSIBILITIES

- Serve as the custodian of the Continuous Emissions Monitoring Systems (CEMS)
- Perform all maintenance, troubleshooting, and calibration of CEMS equipment.
- Possess an intimate knowledge of the Data Acquisition and Handling System (DAHS) and be responsible for the maintaining the database of organized environmental monitoring parameter detail in accordance with all applicable permit requirements and assist in the reporting process as directed.
- Monitor and make revisions to the site CEMS QA/QC Plan.
- Demonstrate specific knowledge of the following:
 - Siemens SPPA-T3000 with Automation server (S7-400-4H) and Turbine control system (SIMATIC FM 458).
 - System Diagnostic Tools.
 - Shutdown and Reboot Handling.
 - Network basics and Diagnostic of Network Component Faults.
 - Hardware components Diagnostics and Replacement (Appl. Server, Automation Server and FUM).
 - Profibus-DP: Electrical Network Diagnostic.
 - I/O Diagnosis, Replacement and Troubleshooting.
 - Off line and On-line loading of application programs.
 - Tracing of signal paths with the dynamic FUP.
 - Simulation of binary and analog signals.
 - Systems analysis, administration, and event managing.
 - Analysis of hardware and software errors.
 - Archive Management: Swap out Handling.
 - System Back – up.




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- Basics of turbine controller.
- Function charts and diagrams.
- Cabinets, structure and rack arrangement.
- Hardware and software components.
- Use of turbine specific macros.
- Programming memory of sub-modules.
- Redundancy principle.
- Troubleshoot, inspect, test, maintain, repair, clean and calibrate instrumentation and solid state and microprocessor based control equipment including plant communications equipment, programmable controllers, distributive control systems, generator excitation equipment, battery chargers, and semi-conductor devices.
- Troubleshoot, inspect, maintain, repair, test and clean electrical equipment including: circuit breakers, motor operated valves, AC&DC motors and controllers, switches, solenoid valves, and rectifiers.
- Use a wide range of test equipment, including recorders, computers, control and tuning modules, PC based software analyzer programs, oscilloscopes, data analyzers, logic test equipment, analog and digital multi-meters, meggers and other test equipment, while performing tests to identify problems and to maintain and calibrate equipment to performance standards.
- Make regular inspection rounds of plant electrical, instrumentation, and control equipment.
- Connect, disconnect, and tag out equipment and circuits for test or repair and safety of personnel and equipment.
- Assist in developing detailed preventive and predictive maintenance operations procedures for plant electrical, instrumentation, and control equipment.
- Install, build, or modify plant electrical, instrument, and control equipment as directed by the Instrumentation Supervisor or Maintenance Manager.
- Pull cable and install and bend conduit.
- Perform inspections in compliance with the National Electrical Code.
- Perform calibration of plant emissions monitoring equipment.
- Perform basic machine tool operations using the drill press, grinder, and lathe.
- Use the oxy-acetylene torch for burning and heating.
- Perform soldering on electronic components.
- Perform rigging and some basic mechanical repairs.
- Maintain shop and other areas of the plant in a neat and orderly fashion.
- Responsible for the safe and efficient use of materials, tools, and test equipment.
- Responsible for his/her safety and all others working around him/her.
- Responsible for, maintenance, troubleshooting, and calibration of process control systems, including pressure transducers, flow meters, temperature transmitters, level transmitters, controllers and meters.
- Responsible for cleaning work area after work is complete.
- Determine and install wiring, conduit, fixtures, transformers, and other electrical devices in the size, type, and arrangement necessary for proper and safe operation of electrical systems, circuits, and equipment.
- Coordinate activities of contractor employees involved in maintenance and repair of plant I/E equipment.
- Comply with plant policy and procedures, in particular, those involving personnel and equipment safety.

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- Perform other duties as assigned by the Instrumentation & Controls Supervisor or the Maintenance Manager.
- Responsibly operate site vehicles; valid driver's license is required.
- Performs on the job training for ICE II and III, Assisting in qualification levels.
- Uses operations qualifications package for cross training requirement.

Job Requirements (Education, Experience, Knowledge, Skills)

- Associates degree in the Instrument and/or Electrical field and/or 5 years related experience.
- Knowledge of AC/DC Circuits, Machines, Electronic theory and components.
- Correctly interpret complex detailed electrical and electronic drawings and prints.
- Thorough knowledge of plant Safety & Environmental procedures.
- Strong knowledge in the use of personal computers and numerous software applications such as Excel, Word, MS Outlook, Powerpoint, Access, etc.
- Ability to productively work independently and as an overall integral Longview team member.
- Must have a thorough knowledge of Plant LOTO system, (Lock-out - Tag-out).
- Must have strong communication skills and the ability to effectively communicate activities with other plant personnel.
- Ability to handle quick changing situations under stress and to work extended hours on short notice if and when required.
- Ability to stay current with changing technologies.

SUPERVISORY RESPONSIBILITIES

Does this job have supervisory responsibilities? No

Supervision Received:


Receives guidance with respect to general objectives; in the majority of tasks and projects assigned, determines methods, work sequences, scheduling, and methods to achieve objectives of assignments; operates within specific policy guidelines.

Are there non-supervisory employees who report directly to this job? No

Are there subordinate supervisors reporting to this job? No

OTHER DUTIES AND RESPONSIBILITIES

- Comply with all Safety & Environmental policies, practices and procedures.
- Participate in proactive team efforts to achieve departmental and company goals.
- Perform other duties as assigned.
- Clean Plant, Shop, and other work areas.
- Provide leadership to others through example and sharing of knowledge/skill.
- The IC & E Technician (Level 1) will be capable of proper HV grounding through out the facility.
- Thorough knowledge of High Voltage in respect to coordinating / supervising a contractor work force.

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- Implement the facility's maintenance programs in the electrical instrument, and control areas.
- Ability to stand in for supervision when required.

EDUCATION and EXPERIENCE

Level of education and experience needed to successfully accomplish the essential duties of this job.

Associate's degree (A. A.) or equivalent from two-year College or technical school; or five years related experience and/or training; or equivalent combination.

LANGUAGE SKILLS

Level of language (ability to read, write, and speak English) needed to successfully accomplish the essential duties of this job.

Ability to read, analyze, and interpret general business periodicals, professional journals, technical procedures, or governmental regulations. Ability to write reports, business correspondence, and procedure manuals. Ability to effectively present information and respond to questions from groups of managers, clients, customers, and the general public.

MATHEMATICAL SKILLS

Level of mathematical skills and abilities needed to successfully accomplish the essential duties of this job.

Ability to work with mathematical concepts such as probability and statistical inference, and fundamentals of plane and solid geometry and trigonometry. Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations.

REASONING ABILITY

Level of reasoning skills and abilities needed to successfully accomplish the essential duties of this job.

Ability to define problems, collect data, establishes facts, and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.

COMPUTER OPERATIONS

Utilize complex computer operations (intermediate programming in 3rd and 4th generation languages, relational databases, and operating systems) and advanced features of software packages (word-processing, spreadsheet, graphics, etc.)



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PLANNING/ORGANIZATION

Handles multiple projects simultaneously.

CERTIFICATES, LICENSES, REGISTRATIONS

Licenses, certificates, or registrations that are required to perform the essential duties of this job.

Valid Drivers License

PHYSICAL/ENVIRONMENTAL DEMANDS

How much on-the-job time is spent in the following physical activities?

	<u>Rare</u>	<u>Occasional</u>	<u>Frequent</u>
Standing	___	___	<u>X</u>
Walking	___	___	<u>X</u>
Sitting	___	___	<u>X</u>
Using hands to finger, handle, or feel	___	___	<u>X</u>
Reaching with hands and arms	___	___	<u>X</u>
Climbing or balancing	___	<u>X</u>	___
Stooping, kneeling, crouching, or crawling	___	<u>X</u>	___
Talking or hearing	___	___	<u>X</u>
Tasting or smelling	___	<u>X</u>	___
Other: Driving	___	___	<u>X</u>
Other: Respirator Use	___	<u>X</u>	___

Does this job require that weight be lifted or force be exerted? If so, how much and how often?

Up to 10 lbs	___	___	<u>X</u>
Up to 25 lbs	___	___	<u>X</u>
Up to 50 lbs	___	<u>X</u>	___



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WORKING CONDITIONS

Outdoors and indoor shop environment with adequate ventilation.

	<u>Rare</u>	<u>Occasional</u>	<u>Frequent</u>
Wet or humid conditions (non-weather)	___	<u>X</u>	___
Work near moving mechanical parts	___	<u>X</u>	___
Work in high precarious places	___	<u>X</u>	___
Fumes or airborne particles	___	<u>X</u>	___
Toxic or caustic chemicals	<u>X</u>	___	___
Outdoor weather conditions	___	<u>X</u>	___
Extreme cold (non-weather)	<u>X</u>	___	___
Extreme heat (non-weather)	___	<u>X</u>	___
Risk of electrical shock	<u>X</u>	___	___
Risk of radiation	<u>X</u>	___	___
Vibration	___	<u>X</u>	___

How much noise is typical for the work environment of this job?

Loud (examples: metal can manufacturing department, large earth-moving equipment)

TRAVEL

Occasional overnight travel (up to 20%) by land and/or air.