



Apprentice Name: _____

Step 5 - Apprentice Substation Technician Job Competency / Demonstration Form

COMPETENCIES/SKILLS		RATING		
		Please circle		
#1	Describe safety precautions applicable to working with insulating (SF6) gas and sealing nitrogen gas.	1	2	3
#2	Describe safety precautions applicable to working with battery banks.	1	2	3
#3	Describe your utility's general procedure for reporting accidents.	1	2	3
#4	Demonstrate how to safely perform DC battery inspections.	1	2	3
#5	Describe how and why substation batteries are put on "equalize" charge. Typically for how long?	1	2	3
#6	Demonstrate how to safely check a substation battery charger.	1	2	3
#7	Explain how substation battery chargers supply power to DC loads.	1	2	3
#8	Demonstrate how batteries are put on "float" charge.	1	2	3
#9	Explain why unintentional grounds on the DC positive and/or negative supply conductors must be located and cleared.	1	2	3
#10	Using substation control wiring diagrams, demonstrate how to trace a wiring circuit and identifying terminal points on devices.	1	2	3
#11	Using the power transformer nameplate: identify where the BCTs are terminated in the power transformer control cabinet.	1	2	3
#12	Locate and describe the control circuits in the transformer cabinet (fan controls, indicating dial, contact points, etc.).	1	2	3
#13	Identify the types of CTs and PTs used in relaying and metering systems.	1	2	3
#14	What types of tests should be performed on CTs and PTs.	1	2	3
#15	Explain what "Minimum Approach Distance" is for energized conductors and equipment.	1	2	3
#16	Explain why arcs, faults, and the "invisibility" of electricity can be dangerous.	1	2	3
#17	Explain why testing for "dead" is important.	1	2	3
#18	Describe how noisy testers, statiscopes, and phasing test sets are used to test de-energized circuits.	1	2	3
#19	Explain what "protective grounding" is.	1	2	3
#20	Describe how switching, tagging, testing for "dead", and grounding can make lines safe for maintenance.	1	2	3
#21	Name the Minimum Approach Distance's for phase-to-phase voltages: 15kV, 25kV, 38kV, 69kV, 115kV, 138kV and 230kV.	1	2	3
#22	Ability to follow directions.	1	2	3
#23	Positive attitude toward work and others.	1	2	3

RATINGS:

1. Exceeds Expectations
2. Meets Expectations
3. Needs Improvement

COMMENTS/REMARKS
<p>I find this apprentice competent in the skills listed above and ready to advance to the next level.</p> <p>Supervisor's signature: _____ Date: _____</p>