

# ADVATEK SYSTEMS INC.

## Section 10

# ELECTRICAL



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The following are the processes and procedures Advatek Systems Inc. employees will follow while working with electrical systems.

### **10.0 References**

[Canadian Standards Association \(CSA\) - CSA Z462-08 Workplace Electrical Safety](#)

### **10.1 Training**

Advatek Systems requires that employees who will be working in with electrical systems be provided electrical awareness training. This includes identifying the type of electrical system, identifying lock and shut off points, identifying electrical voltage and current capacities. Employees who have not received this training will not be permitted to work with electrical systems.

### **10.2 Installation**

Advatek Systems does not permit its employees to install main run AC lines. They are permitted to tie these into the systems as required but the main runs to and from panels MUST be performed by a certified electrician or customer appointed source.

### **10.3 Safety**

Advatek Systems Requires the following items are observed and adhered to while working with electricity.

- Employees must ensure that all sources of electricity must be turned off or disconnected before working on equipment.
- If an employee is working on a circuit that can be turned back on, the employee must ensure that the power can not be accidentally turn back on. This can be done by labeling / covering the switch(s) with a tag stating system is under maintenance do not use.
- Employees must ensure that the equipment been used in the installation is been used in a manner in which it was designed for.
- Employees must check extension and power cords for damage before use. If damaged they are to be repaired or discarded. If they are to be repaired they must be tagged as such on both ends to prevent accidental use.
- Employees who notice defective electrical components must remove them from service and tag them as defective
- Employees shall ensure that no flammable materials are stored near electrical equipment. If it is noticed then the flammable materials are to be moved immediately.

- Employees must ensure that portable electronic equipment that is to be used outdoors or in a damp location must be protected by a GFCI (ground fault circuit interrupter).
- Employees have the right to refuse to work if they feel the electrical situation is beyond their level of capability or training.
- Employees must at all times when working with electricity be aware of the dangers associated with it

#### **10.4 Protective Equipment**

Advatek Systems requires that all employees must have access to proper PPE while working with electricity and that the PPE also be used. Advatek Systems will ensure that employees have been shown what is to be used to perform their jobs.

#### **10.5 Noted Dangers & Symbols**

Please take special note of the following potential dangers

- electrical shock—"trauma caused by the passage of electric current through the body (as from contact with high voltage lines or being struck by lightning); usually involves burns and abnormal heart rhythm and unconsciousness "
- arc flash—"Arc flash temperatures can reach or exceed 35,000 °F or approx 20,000 °C at the arc terminals. The massive energy released in the fault rapidly vaporizes the metal conductors involved, blasting molten metal and expanding plasma outward with extreme force. A typical arc flash incident can be inconsequential but could conceivably easily produce a more severe explosion (see calculation below). The result of the violent event can cause destruction of equipment involved, fire, and injury not only to the worker but also to nearby people. "

