

## **Pick Light Safety**

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How dangerous are pick lights? After all, they are running on the same current in most instances as a standard household lamp or clock. The answer is simple but alarming: more people are killed annually by standard 120 volt household current than are killed by any other amplitude of electricity. The hazard is there, and you cannot afford to ignore it.

As we know, pick lights are used in high humidity and wet environments. Whether a room is lighted for filling Phase I compost or a waterman sprays the lights during the harvest phase of the crop, pick lights are exposed routinely to high moisture. At the same time, it is common knowledge that electricity and water do not mix. More specifically water will give electricity the means to move outside of the areas designed to carry it. This opens the door for electrical shock and electrocution. We try preventing this by isolating the electricity from water (or any other conductive material for that matter). When that isolation becomes compromised, people get hurt. A comprehensive pick light safety program will mitigate this risk significantly.

### ***Start Before It's Too Late***

I suggest a three-part program to improve the safety of your pick lights: inspection, repair and replacement. The inspection portion of the program will reveal compromised protective coverings as the most common safety issue. You should be looking for damaged or cut outer layer of the cable, areas where the cord has abrasions, cracks or splits in the housing and any other area that might let water get into the electrical components. Also the inspector should test to ensure there is a good ground connection and that there isn't any current running where it shouldn't be. Each light should have an identification number and a next inspection due date sticker attached where it can be seen from room walkways (See photo). If the light is in good condition send it back into service, if not send it for repair.

Anyone doing repairs on these lights needs to be trained on how to do them properly. They should know how to take the light apart and put it back together. They should understand some basic electrical theory and understand the conditions that make using these systems in a mushroom double unique. They should know how to seal your lights to ensure no water can enter them. Silicone spread liberally on joints, cracks and seams should make your lights watertight. When doing the repairs, it's also important to determine when the light is not worth repairing. Prior to reading this article you may have thought that every light is worth repairing. I hope after reading it you set that point a bit lower and start replacing the lights more frequently and with lights that satisfy OSHA requirements.

In other words, an inspection and repair program, however methodical, does not ensure compliance with the OSHA regulations. The OSHA regulations and interpretations are quite clear on fixtures in wet locations (See Sidebar). The regulation on lighting fixtures, lamps, and receptacles in damp locations is located in 29 CFR 1910.305(j)(1)(iv). This means the manufacture and listing organization must certify that that light is able to comply with this standard. The OSHA regulations also make it quite clear what an "acceptable" installation or piece of equipment is. This is located at 29 CFR 1910.399. Ultimately, as an employer, you must ensure that your pick lights fulfill these requirements.

Some of you may be looking at this and saying, “I will have to sell the farm just to put new lights in that meet this requirement.” While it is a costly and intensive process to ensure your lights are safe and meet the OSHA requirements, if you set out a plan you will be able to ensure that you and your employees are safe. You will be moving towards compliance and slowly making an investment in safety by replacing your lights with approved models.

Develop a plan. Inspect your lights frequently. Be religious with your schedule and document that the inspections are being done. Set a point at which you will no longer repair a light. For instance, if a ballast is bad, take the light out of service, but if the bulb is bad, replace it and put the light back in service. Once a light is out of service, don’t replace it with a “non-approved” light. Purchase approved replacements. As you follow this plan you will phase out the old lights and gradually phase in the new “approved” lights.

Most important, phasing in the lights in this way will be keeping the lights you have safe. You will be making a good faith effort to eliminate the hazard associated with these lights while you replace them with those that meet OSHA requirements. The safety margin your inspection and repair program creates will extend the period in which you invest in new “approved” lights. As is so often the case, having a well-organized and carried out plan of inspection, repair *and* replacement will save you more money than being reactive to a situation if an accident occurs.

### ***OSHA Regulations on Fixtures in Wet Locations***

The OSHA regulations and interpretations are quite clear on fixtures in wet locations. The regulation on lighting fixtures, lamps, and receptacles in damp locations can be found in 29 CFR 1910.305(j)(1)(iv):

*“Fixtures installed in wet or damp locations shall be identified for the purpose and shall be so constructed or installed that water cannot enter or accumulate in wireways, lampholders, or other electrical parts”*

The OSHA regulations also make it quite clear what an “acceptable” installation or piece of equipment is. The regulation can be found at 29 CFR 1910.399:

*(1) If it is accepted, or certified, or listed, or labeled, or otherwise determined to be safe by a nationally recognized testing laboratory ...or*

*(2) With respect to an installation or equipment of a kind that no nationally recognized testing laboratory accepts, certifies, lists, labels, or determines to be safe... and found in compliance with the provisions of the National Electrical Code as applied in this subpart; or*

*(3) With respect to custom-made equipment or related installations that are designed, fabricated for, and intended for use by a particular customer, if it is determined to be safe for its intended use by its manufacturer on the basis of test data which the employer keeps and makes available for inspection to the Assistant Secretary and his authorized representatives.*