

The Fabulous
Lighting Maven
Unexpectedly Illuminating

ACTION-ORIENTED PEARLS OF WISDOM FOR INDUSTRIAL MANAGERS AND CONTRACTORS
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Dear Reader:

Those fluorescent lamps you're considering replacing with new LED are a toxic bomb, so we suggest you think carefully about their handling and disposition as you plan out your retrofit project.

They've got to be handled properly, because improper handling puts your employees and their families – particularly young children – at risk. Reason number two is because it's the law. It's hazardous waste, falling under the auspices of federal EPA guidelines, and your state's EPA laws.

MERCURY EFFECTS

The [World Health Organization](http://www.who.int) explains the effects of Mercury on human health very well:

“Elemental and methylmercury are toxic to the central and peripheral nervous systems. The inhalation of mercury vapor can produce harmful effects on the nervous, digestive and immune systems, lungs and kidneys, and may be fatal. The inorganic salts of mercury are corrosive to the skin, eyes and gastrointestinal tract, and may induce kidney toxicity if ingested.

“Neurological and behavioral disorders may be observed after inhalation, ingestion or dermal exposure of different mercury compounds. Symptoms include tremors, insomnia, memory loss, neuromuscular effects, headaches and cognitive and motor dysfunction. Mild, subclinical signs of central nervous system toxicity can be seen in workers exposed to an elemental mercury level in the air of 20 µg/m³ or more for several years. Kidney effects have been reported, ranging from increased protein in the urine to kidney failure.”

Children are particularly susceptible to the effects of mercury, as it is a leading cause of damage to their developing nervous systems. Employees bringing home mercury particulates from a broken lamp on their clothes, then releasing it into the air within the home can set up conditions where children will ingest it, and bring the toxin into their bodies.

In addition to nervous system damage, the [National Library of Medicine](http://www.nlm.nih.gov), says that “inorganic mercury compounds are nephrotoxic and can cause kidney damage in children. The main target in the kidneys is the proximal tubules. To some extent, the tubular cells are able to regenerate. However, in severe cases of inorganic mercury intoxication, the function of the kidneys can be limited and death might occur due to acute kidney failure.”

Mercury is bad stuff. We suggest Facilities Managers take every precaution in the handling and disposing of fluorescent lamps, ensuring the safety and good health of their employees and families.



U.S. Power is an industrial energy services company that specializes in the reduction of energy consumption across a broad array of manufacturing and food processing facilities located in Michigan, Ohio, Indiana, Illinois and Wisconsin. In addition, the company publishes a useful curation of lighting-oriented information from the marketplace, and consolidates it into this concise, twice per month letter known as The Fabulous Lighting Maven, distributed to Facilities Managers throughout the nation.

While the company prides itself in its diversity, it owns and operates a niche lighting contracting firm as well, known as U.S. Power Vision, LLC. With a core business in and around industrial LED lighting, it keeps itself and its clients at the cutting edge of illuminating technologies, all aimed at providing – from the eyes to the fingertips – exceptional illumination, superb control and intuitive simplicity.

YOUR MORNING GRIN

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Only one. But the light bulb has to want to change.

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Ron Motsch
(616) 570-9319

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