



Teck Fluorescent Light Bulb Recycling:

The recovery of mercury from light bulbs that have reached the end of their useful life and might otherwise be disposed of in a landfill.

We are part of the solution ... and so are you

Teck Trail Operations' light bulb recycling process offers an environmentally preferable alternative to the disposal of bulbs. Mercury in the bulbs is recovered for reuse in new bulbs.

The company is a pioneer in metals recycling, having developed the first lead-acid battery recycling program in Canada over 25 years ago.

In 2006, Teck Trail Operations began recycling electronic waste and since then has processed 25,000 tonnes of end-of-life electronics.

Recycling spent light bulbs is another example of how Teck strives to be an active part of the solution - today and for years to come.

Resources

For more information on Teck recycling activities:
www.teck.com/recycling

To locate recyclers with a Bulb Eater near you:
www.swrl.com



Why recycle light bulbs?

Teck's role in light bulb recycling

Teck Trail Operations has developed a process to recycle old fluorescent light bulbs. All parts of the bulbs are recycled: glass, metal, and mercury. The process was designed in keeping with our stringent environment controls, in order to meet all provincial environmental performance requirements. It utilizes existing equipment and technology at Teck Trail Operations – one of the most modern and efficient refineries in the world.

Teck has the capacity and equipment to recycle fluorescent light bulbs, thereby eliminating disposal in landfills. The mercury is recovered for reuse in new fluorescent bulbs, thus completing the recycle loop.



1. Why should I recycle my old light bulbs?

More Canadians are switching to fluorescent light bulbs for the energy saving benefits; however, this brings an environmental issue with it.

A fluorescent bulb uses mercury to generate light. This is a potential environmental hazard if not handled correctly throughout its lifetime.

Teck ensures all fluorescent light bulb materials received are processed in an environmentally sound manner.

2. How can I recycle my light bulbs?

Teck has begun working with Sybertech Waste Reduction Ltd. to provide a recycling process available to businesses.

3. What Does Teck do with the light bulbs?

Teck receives pre-crushed bulbs, which reduces the total volume of material thereby making transportation more efficient. This efficiency minimizes the greenhouse gas emissions associated with transportation.

The crushed light bulb material is divided into three feed materials:

- Glass
- Metal and ceramic
- Mercury-bearing dust

The glass is used as a fluxing agent, which lowers the overall temperature needed to smelt lead. It also replaces a mined source of flux having a two-fold benefit: conserving natural resources and saving energy.

Metal and ceramic parts are smelted to recover lead, zinc, cadmium, arsenic, antimony and mercury. Any non-recoverable materials, such as ceramics, become part of the ferrous granule product that is used in the manufacture of Portland cement, finding a new life as a construction material.

Mercury is recovered from the dust through a Roasting process and captured as a stable mercury chloride product. This is refined by a specialty distiller and sold back to lighting manufacturers for another lifecycle in a new light bulb.