

# Case in Point



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## Identifying CCA Treated Wood to Avoid Pollution

### CCA Wood Disposal Causes Pollution, Can Be Costly

Arsenic-treated CCA wood often presents a toxic hazard - from its beginnings in China where arsenic is mined and imported here to create the CCA (Chromated Copper Arsenate) formula used in treated wood, to its use in treated wood products in parks, playgrounds and backyards. Eventually it may come to a local landfill at the end of its life. As CCA treated wood is being phased out, the disposal issues surrounding it are now coming to the surface, creating problems as troublesome as the arsenic in the wood itself.

CCA wood poses long-term health and environmental dangers. An inorganic form of arsenic leaches out onto the CCA treated wood and into the surrounding soil. Many unlined landfills and recycling facilities do not test wood materials and thus do not know they are handling or disposing of CCA, thus risking the leaching of arsenic or other metals. Disposal is of considerable concern in the Southern USA due to the high volume of pressure-treated wood and the fact that the water table is closer to the surface. Releases of chromium and copper are also concerns. When CCA is disposed of by incineration, the chromium and copper are not destroyed, but concentrated in the ash that can be sold for fuel. The arsenic, released as a vapor, can be trapped in pollution control equipment or escape into the atmosphere.

### Disposal Operators Need To Identify CCA Wood Before It Can Create Problems.

It's not always easy to recognize old CCA Wood, and that can lead to costly mistakes. Recyclers need a performance-proven screening tool to make sure they can separate CCA treated wood from "clean" wood to distinguish what can be ground-up for recycling or what must go into more costly lined landfills.

The demand for the disposal of CCA treated wood will increase significantly over the next decade, putting on more pressure for costly environmental compliance. Many municipal incinerators will not be able to operate economically if they are forced to absorb hazardous waste disposal fees for the toxic ash. The only current safe disposal method for CCA treated wood is for it to be placed in lined landfills; unlined ones would suffer from dangerous leaching effects into the ground and possibly into the ground water.

### Innov-X's XRF Technology Reveals CCA Wood With Simple "Point and Shoot" Solution

The Innov-X handheld XRF identifies CCA treated wood in 2-3 seconds, then displays and stores confirming chemical analysis and spectrum. The analyzer is an x-ray tube based portable tool, making it ideal for use at landfills or recycling sites. Unlike colorimetric techniques that take longer and are not always definitive, XRF provides quantitative, fast, simultaneous analysis of copper, chrome, arsenic and over 20 other metals in seconds, in ppm. The simultaneous measurement of chrome and copper, in addition to arsenic, provides instant confirmation of CCA presence. The Innov-X unit also analyzes soil, filter & wipe media, plant material, paints and coatings. There are no radioactive sources, thus burdensome isotope regulations don't apply, making site to site travel a breeze.

For more information on the Innov-X XRF Analyzer, contact:

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| Uses for Portable XRF Analyzer          | Chemicals Measured       |
|---|--------------------------|
| Utility Pole & Railroad Tie Inspections | Br for Bromine           |
| Coring Analysis                         | Cu, Cr & As for CCA      |
| Wet or Painted Wood Surfaces            | Cu, Zn & As for ACZA     |
| Preservative Retention & Penetration    | Cu for ACQ               |
| Full Elemental Analysis                 | Cl for Pentachlorophenol |
| Label and Branding Verification         | Zn for Zinc Borate       |
| QC: Pass/Fail Sorting                   | I for IPBC               |

Applications for Portable XRF Analyzer in Treated Wood Recycling.