



Do you test water supplies for lead or copper?

Would you like to improve this process in the following areas?

- **Meet environmental compliance regulations.** Measure the amount of lead in drinking water to determine if it exceeds National Primary Drinking Water Standards.
- **Improve workers' safety and health.** No change to current operations.
- **Increase productivity.** No change to current operations.
- **Save money.** Reduce costs associated with laboratory analysis of water samples.



Water Lead Analyzer

*The Water Lead Analyzer provides a rapid and accurate method to detect the presence of lead and other trace metals in drinking water. Navy buildings may have old water pipes that can yield levels of lead in drinking water that exceed National Primary Drinking Water Standards (40 CFR 141). While this equipment can provide detection down to parts per billion levels, it should not be used as a replacement for mandated laboratory testing as specified by 40 CFR 141.23(k)(1). Water Lead Analyzers are available as portable units or as flow-through units. The portable unit is a hand-held, battery-operated instrument that can accurately and reliably determine trace metal levels in water within 3 minutes. The disposable sensor design prevents cross-contamination during each new sample reading. It reads to parts per billion levels by using potentiometric stripping analysis (PSA). The flow-through unit is designed for unattended collection and analysis of trace metals in water using PSA. It has an embedded computer which permits real-time data entry and remote data access by modem. This technology has been tested at the Washington Navy Yard as a 1995 NELP Initiative. **This equipment is available through the Navy Pollution Prevention Equipment Program (PPEP).***

How can you achieve these improvements?

Use a Water Lead Analyzer.

How does this equipment work?

The analyzer uses a potentiometric stripping analysis method to accurately test for trace metals in water within three minutes.

How will this equipment save you money?

The Water Lead Analyzer can reduce the costs associated with water sample laboratory analysis. It can also identify potential problems before expensive equipment or piping replacement is necessary. The cost of the analyzers is approximately \$4,200 for portable units and \$25,000 for the flow-through unit.

How can this P2 equipment eliminate or reduce pollution?

This equipment can detect the presence of heavy metals in drinking water, but does not directly result in any pollution reductions. Use will result in the following benefits:

- Aid in tracking identified problems to specific sources within the water distribution system.
- Aid in identifying the presence of heavy metals in wastewater prior to discharge to treatment works.

Which shops can benefit most from this equipment?

This technology can be used to test the water supply system for heavy metals. Typical shops include:

- Public Works Centers
- Hospitals
- Day Care Centers

How can this equipment reduce regulatory compliance concerns?

This equipment can identify lead contamination of drinking water. It should not be used as a replacement for mandated laboratory testing as specified by 40 CFR 141.23(k)(1). Implementation of this technology will result in the following regulatory compliance benefits:

- Aid in determining if the amount of contaminants in a water supply exceeds the National Primary Drinking Water Standards.
- Help industrial activities determine if they are meeting discharge limits established by the treatment works.
- Provide facility operators with data to supplement information obtained through mandated monitoring analyses.



Achieving Environmental Compliance Through Pollution Prevention

Every day the Navy faces the challenge of operating and maintaining the fleet while complying with environmental regulations. This burden can be reduced by using pollution prevention technologies and methods to reduce compliance requirements. This fact sheet is one in a series designed to encourage activities to use pollution prevention technologies and methods. The overall goal of this series is to promote sustained environmental compliance at the lowest life-cycle cost.

For additional information, contact:

PPEP Equipment Book (<http://www.lakehurst.navy.mil/p2/index.html>).

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