



# Do you dispose of used antifreeze?

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

- **Meeting environmental compliance regulations** -- Reduce coolant storage, transportation and purchasing requirements. Regulatory areas include RCRA.
- **Improving workers' safety and health** -- No change from current operations.
- **Increasing productivity** -- No change from current operations.
- **Saving money** -- Decrease antifreeze procurement and disposal costs.



Antifreeze Recycling Unit

*Some states consider spent antifreeze a hazardous waste due to toxicity of the ethylene glycol component, degradation/oxidation potential and/or heavy metals content. Recycling spent antifreeze is a cost effective alternative to disposal. For use in automotive and support equipment applications, the Navy P2 Equipment Program (PPEP) is purchasing a filter/chemical precipitation unit. Ion exchange and vacuum distillation units are available through the supply system for use in tactical vehicles. All units produce waste either in the form of sludge or spent filters. Some units may not be capable of restoring antifreeze to conformance with military specifications. Off-site recycling is another alternative to spent antifreeze disposal. Some companies recycle spent antifreeze and return it to the user, while others charge handling fees and sell the antifreeze to the users. Antifreeze recycling equipment is being used at many Navy installations. **The Filter/Chemical Precipitation system is available through the PPEP. Other systems are available from GSA.***

## How can you achieve these improvements?

Implement On-Site Antifreeze Recycling or Initiate an Off-Site Antifreeze Recycling Service Contract.

## How does this equipment work?

Waste antifreeze is poured into the unit where it is filtered and processed to restore it to new antifreeze specifications.

## How will this equipment save you money?

An antifreeze recycling unit will eliminate the cost of disposing spent antifreeze as a hazardous waste. It will reduce the procurement of new antifreeze. On-site units cost between \$4,000 and \$12,000 and can usually pay for themselves in one to three years. For a complete cost analysis refer to Joint Services P2 Opportunity Handbook Data Sheet 6-6.

## Typical Process Flow Diagram



How can this technology eliminate or reduce pollution?

This technology can significantly reduce new antifreeze purchases. Implementation will result in the following pollution reductions:

- Reduces the Amount of Hazardous Waste Disposed

Which shops can benefit most from this technology?

This technology can be used in processes that require antifreeze. Typical shops include:

- Automotive Maintenance
- Equipment Maintenance

Take action: How can you implement this technology?

- **Activity Shop & Work Center Personnel.** Contact your Pollution Prevention Program Manager. The P2 Program Manager can provide more information and conduct a more detailed analysis, and may be able to provide this equipment at no cost to a Shop or Work Center.

- **Activity Pollution Prevention Manager.** Request this equipment through the Navy P2 Equipment Program (PPEP). Depending on the application, the Environmental Program Requirements Cookbook may contain project submission information for annual budget requests sent to your claimant.

- **For Additional Technical Information.** More information about this technology can be found on the Joint Service P2 Opportunity Handbook Data Sheet Number 6-6 (Web: <http://www.nfesc.navy.mil/enviro/index.html>) and in the PPEP Equipment Book (Web: <http://www.lakehurst.navy.mil/p2/index.htm>).

### 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 implementing pollution prevention technologies and methods to reduce compliance requirements. This Fact Sheet is one in a series designed to encourage activities to implement 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:

**Program POC: Mr. Eugene Wang, ESC 423**

(805) 982-4291, DSN: 551-4291

E-mail: [ewang@nfesc.navy.mil](mailto:ewang@nfesc.navy.mil)

**Technical POC: Mr. Tom Rua, Code 4.8.2.5,**

**NAWS Lakehurst (732) 323-2140, DSN 624-2140**

E-mail: [rua@lakehurst.navy.mil](mailto:rua@lakehurst.navy.mil)

