



# Navy Environmental Quality Fact Sheet



## Do you apply paint to parts, equipment, or structures?

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

- **Meet environmental compliance regulations.** Reduce air emissions and paint hazardous waste disposal. Media areas include air and hazardous waste programs.
- **Improve workers' safety and health.** Reduce exposure to VOCs released from paints.
- **Increase productivity.** Reduce the time required to manage environmental compliance.
- **Save money.** Reduce environmental compliance requirement costs and hazardous waste disposal costs.



Low VOC Paints

The Navy spends a considerable amount of time and money applying paint to vehicles, equipment, ships, aircraft, and buildings. Paint application is essential to prevent corrosion. Paints traditionally contain volatile organic compounds (VOC). When the paints dry VOCs are released, contributing to the formation of ground-level ozone (smog) which can damage lung tissue, cause respiratory illness, and damage crops. Many low VOC paints are available. Low VOC paints are water based with significantly lower VOCs than conventional solvent-based paints. Water based paints are composed of synthetic resins and pigments that are suspended in water by surfactants. Problems associated with the use of water based paints include material incompatibility and high voltage electrical conductivity. Water based and low-solvent paints are being used successfully at several Navy installations.

### How can you achieve these improvements?

Use low VOC paints.

### How does this equipment work?

Low VOC paints are special formulations that contain less volatile solvents.

### How will this equipment save you money?

The cost of low VOC paints is dependent on the application and, in most cases, will be similar to traditional paints. Money will be saved primarily due to reductions in labor hours and hazardous waste management.

## Typical Process Flow Diagram



How can this technology eliminate or reduce pollution?

This P2 method can reduce worker exposure to harmful paints and solvents. Use will result in the following pollution reductions:

- Reduction in VOCs released during paint application.
- Reduction in solvents use and the resultant air emissions and hazardous waste disposal.

Which shops can benefit most from this technology?

This technology can be used in typical painting processes including paint spray guns. Typical shops that could benefit include:

- Aircraft painting
- Support equipment painting

How can this technology reduce regulatory compliance concerns?

This technology reduces VOC emissions. Use will result in the following regulatory compliance benefits:

- May help reduce facility-wide air emissions below applicable major source threshold. (Facilities that are not a major source for any pollutant do not need a Title V permit.)
- May reduce or eliminate local VOC compliance requirements in ozone nonattainment and maintenance areas.
- May generate emission reduction credits to offset emission increases under New Source Review and Prevention of Significant Deterioration; if credits meet certain criteria, they may qualify for local emission trading/banking programs.

### 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:

Joint Service P2 Opportunity Handbook Data Sheet Number 4-7  
(Web: [http://p2library.nfesc.navy.mil/P2\\_Opportunity\\_Handbook/4\\_7.html](http://p2library.nfesc.navy.mil/P2_Opportunity_Handbook/4_7.html)) and the GSA Environmental Products Guide (Web: <http://www.northwest.gsa.gov/>)

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