

POLLUTION PREVENTION

IN RHODE ISLAND

Case studies of the Rhode Island On-Site Technical Assistance Program

Boat Builder Acetone

Fiberglass boat builder implements on-site reclamation and reduces virgin acetone purchases.

Industry \ Contact

SIC Code: 3732 Fiberglass Boat Builder, Rhode Island

Contact: RI Port Authority Marine Trade Pollution Prevention Research Project

Client #1

Technology Description

The Company provides fabrication and repair services for fiberglass reinforced plastic (FRP) boats and produces a line of dinghies (8-15 foot) and powerboats (30 foot). The company has been in business for 65 years and employs approximately 10 people. Since purchase of the still, production has scaled back to approximately half of levels at the time of still purchase.

The spent acetone was previously stored on site prior to hauling via a waste service contractor. At that time, production levels dictated purchase of 40 drums of virgin acetone per year.

The spent acetone is now reclaimed with an on-site still. Current production levels (half of those prior to still purchase) dictate purchase of 12 drums of virgin acetone per year.

Feedstock Materials

Records of acetone usage prior to still use would indicate a current acetone requirement of 20 drums per year. Acetone usage is actually 12 drums per year with the still in operation.

Costs

The five gallon capacity still produced by Hoyt, Inc. was purchased for \$3,300.

Operation \ Maintenance

Approximately thirty minutes per day that the still is in operation.

Savings

90 gallons of projected acetone usage per month with no still (\$315) reduced to 55 gallons of acetone usage per month with the still (\$193).

Payback Period

At the reported rate of feedstock reduction, the still pay back period is 2 years and 3 months.

Impact

Reduction in the consumption of acetone through reclamation has resulted in a significant savings in purchases of virgin material. Still bottom residues are also of much lower volume than spent acetone representing lower waste disposal costs.