Florida Department of

Memorandum **Environmental Protection**

TO: Rick Bradburn
THROUGH: Armando Sarasua, P.E.
FROM: Angelia M. Jackson
DATE: December 5, 2008
SUBJECT: Evaluation Summary for Century Boat Company, Inc., Bay County, 0050061-008-AC.

We recommend issuing a construction permit to Century Boat Company, Inc., for their Panama City boat manufacturing facility. This permit removes limitations on materials usage and individual HAP species as stated in previous permits. Most of VOC and HAP emitted is Styrene. The new HAP limit is based on the equation from 40 CFR 63.5698 in Specific Condition A.6. Limit varies with mass of resins and gelcoats used.

Process Description.
This facility consists of fiberglass boat manufacturing and associated activities. This site consists of five major structures, identified as Building 1 through 6 (alternately Plant 1 through 6) running approximately north to south on the site plan.

Building 1	Contains offices and administrative functions
Building 2	Gelcoating and Lamination activities (main source of VOC) and Cabinet Shop and Upholstery/Canvas activities
Building 3	Maintenance Building
Building 4	Gelcoating and Lamination activities (main source of VOC)
Building 5	Parts and Materials storage
Building 6	R&D/prototype/warranty repair activities

In Buildings 2 and 4, a layer of (typically pigmented) gelcoat is spray applied to the prepared molds in the enclosed gelcoat areas. After the application of the gelcoat layer, the molds are moved to the lamination area, where the various layers of resin and fiberglass are applied using non-atomized mechanical spray techniques. The resin is hard piped to the point of use from the resin storage tank. Gelcoating of "small parts" such as hatches, consoles and components is performed primarily in Building 4. Some small part manufacturing is done in Building 2 using the same techniques as for the larger hulls and decks. After the gelcoating, the small parts follow the same process as the hulls and decks.

After curing the hardened fiberglass hull and deck parts (and small parts) are removed from the molds and the excess material "flashing" is trimmed, typically with a hand held air driven cut off tool. Floatation and structural foam may be added depending on the requirements of the particular model being constructed. Imperfections in the surfaces are removed by grinding the surface in one of the "grinding booths" and re-applying gelcoat and/or resin. These booths are equipped with dust collection systems with internally recirculated exhaust. The booths have had minor reconfigurations which have improved the airflow and collection efficiency compared to the original design. No exhaust air is emitted from these booths to the outside, and the booths are considered exempt from air permitting requirements.

The hulls are moved to an assembly area to be finished with decking, hatches, hardware, electrical systems and motors.

Pollution Control Equipment.
Grinding booths are equipped with dust collection systems with internally recirculated exhaust. No particulates are discharged outside the building from the grinding booths.

The minor quantities of particulates generated from the trimming, cutting, shaping and sanding operations performed by hand tools are controlled by normal, non-specific "good housekeeping" type procedures, including frequent cleaning of surfaces using portable "shop-vac" type vacuum collectors where appropriate and sweeping of floors.

Each of the gelcoat and resin application areas are exhausted uncontrolled by upward firing fans; the work areas utilize a "push-pull" process, where outside air is forced across the work area and directed towards an exhaust fan discharging above ground level. This technique, and the higher than normal exit velocity, results in improved dispersion and minimizes the potential for odor complaints.

Environmental Impact.

Airborne Contaminant Emitted	FAC Rule	Estimated Emissions		Allowable Emissions	
		lbs/hr	T/yr	lb/hr	T/yr
VOC	N/A	N/A	175*	N/A	$=f(m_i)$*
HAPS (Combined)	N/A	N/A	175*	N/A	$=f(m_i)$*
Objectionable Odors	62-296.320(2)	N/A	N/A	None allowed off plant property	
VE^2	N/A	N/A	N/A	Not more than 20% opacity	

* 175 TPY current estimate. Most of VOC and HAP emitted is Styrene. Limit is based on equation from 40 CFR 63.5698 in Specific Condition A.6. Limit varies with mass of resins and gelcoats used.

Applicable Rules & Regulations.
This facility is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP 40 CFR 63 Subpart VVVV) for existing boat manufacturing.

Compliance Monitoring.
This facility elected to demonstrate compliance with Subpart VVVV by averaging emissions with the applicable MACT model point value equations and record keeping. The facility opted to use carpet and fabric adhesives that comply with carpet and fabric adhesives operations standards contained in Subpart VVVV.

Compliance History.
DEP inspections for 2008, 2007, 2006, 2005 – Facility noted to be In-Compliance.

Fee Summary.
Century Boat Company, Inc., is a Title V facility and is exempt from permitting fees.

AMJ/ajc