§ 91.1304 Averaging.

(a) A manufacturer may use averaging across engine families to demonstrate a zero or positive credit balance for a model year. Positive credits to be used in averaging may be obtained from credits generated by another engine family of the same model year, credits banked in previous model years, or credits obtained through trading.

(b) Beginning in model year 2004, credits used to demonstrate a zero or positive credit balance must be used at a rate of 1.1 to 1.

§ 91.1305 Banking.

(a) A manufacturer of a marine SI engine family with an in-use compliance level below the applicable FEL to which the engine family is certified for a given model year may bank positive in-use credits for that model year for use in in-use averaging and trading.

(b) A manufacturer may consider credits banked 30 days after the submission of the report required by § 91.1309(a). During the 30 day period EPA will work with the manufacturer to correct any error in calculating banked credits, if necessary.

§ 91.1306 Trading.

(a) A marine engine manufacturer may exchange positive in-use emission credits with other marine engine manufacturers through trading.

(b) In-use credits for trading can be obtained from credits banked for model years prior to the model year of the engine family requiring in-use credits.

(c) Traded in-use credits can be used for averaging, banking, or further trading transactions.

(d) Unless otherwise approved by EPA, a manufacturer that generates positive in-use credits must wait 30 days after it has both completed in-use testing for the model year for which the credits were generated and submitted the report required by § 91.1309(a) before it may transfer credits to another manufacturer or broker.

(e) In the event of a negative credit balance resulting from a transaction, both the buyer and the seller are liable, except in cases involving fraud. Engine families participating in a negative trade may be subject to recall under subpart I of this part.

§ 91.1307 Credit calculation.

For each participating engine family, emission credits (positive or negative) are to be calculated according to the following equation and rounded, in accordance with ASTM E29–93a, to the nearest gram. ASTM E29–93a has been incorporated by reference. See § 91.6. Consistent units are to be used throughout the equation. The following equation is used to determine the credit status for an engine family whether generating positive or negative in-use emission credits:

$$\sum_{t=1}^{\text{max useful life}} \frac{S(t) \times \text{sales} \times (\text{FEL} - \text{CL}) \times \text{Power} \times \text{AF} \times 0.207 \times \mu_{\text{use}}}{1.03^t}$$

Where:

S(t)=cumulative fraction survived at time t;

μ_{life}=average useful life in years, specific to the power rating and the application as given below.

Engine type	$\left(\mu_{\text{life}} \right)$
Outboard	$41.27 \times \left(\dfrac{\text{Power}}{0.746} \right)^{-0.204}$
Personal Watercraft	10

Power = the average power of an engine family in kW (sales weighted). The power of each configuration is the rated output in