

APPENDIX D

CALIFORNIA AIR RESOURCES BOARD

CALIFORNIA RECREATIONAL HARBORCRAFT DIESEL FUEL CONSUMPTION

Methodology to Calculate Recreational California Harborcraft Diesel Fuel Consumption

APPENDIX D

Estimation of Statewide Consumption of Diesel Fuel by Recreational Harbor Craft Using ARB 2003 Emissions Inventory

Assumptions:

- ? Average specific fuel consumption of 203 grams per kw-hr (Entec U.K., 7/2002)
- ? Average NOx emission factor of 12 grams per kw-hr (Entec U.K., 7/2002)
- ? Emissions from ARB's 2003 Emissions Inventory (Appendix X)
- ? All diesel fuel used by recreational craft is U.S. EPA onroad diesel fuel, except in the North Coast region (coastal areas north of the Bay Area)

Sample Calculation:

$2.79 \text{ Ton NOx/day} \times 2000 \text{ lb NOx/Ton} \times 454 \text{ grams NOx/lb.} \times \text{kw-hr}/12 \text{ g NOx} \times$
 $203 \text{ g fuel/kw-hr} \times \text{lb fuel}/454 \text{ g} \times \text{gall fuel}/7\text{lb} \times 365.25 \text{ day/yr.} = \mathbf{4.9 \text{ million gallons}}$

Recreational Harbor Fuel Consumption by Region and Fuel Type (million gallons)

| California Region | All Diesel | CARB Diesel | EPA On-Road |
|---------------------------------|------------|-------------|-------------|
| S.F. Bay Area Air Basin | 0.41 | 0 | 0.41 |
| South Coast Air Basin | 1.78 | 0 | 1.78 |
| North Coast Air Basin | 0.07 | 0.07 | 0 |
| All Other Areas | 2.66 | 0 | 2.66 |
| Total Recreational Craft | 4.9 | 0.07 | 4.8 |