Ventura County Air Pollution Control District Carl Moyer Program Final Report
Phase 4 Air Resources Board Funds
Marine Vessel Repower Projects

Project Number	District	Year of Funding 1-98/99 2-99/00 3-00/01 4-01/02 5-02/03 6-03/04	Source of Funding	Applicant - Vessel Name	Environmental Justice Score	Project Address (Street Address)	Project Location (City)	Project Location (County)	Project Location (Zip Code)	Port
VCCMP 02 - 14	Ventura	4	Carl Moyer	Marine Vessel "Lenbrooke"		Channel Islands Blvd	Oxnard	Ventura	93030	Channel Island Harbor
VCCMP 02 - 14	Ventura	4	Carl Moyer	Marine Vessel ""Lenbrooke"		Channel Islands Blvd	Oxnard	Ventura	93030	Channel Island Harbor
VCCMP 02 - 15	Ventura	4	Carl Moyer	Marine Vessel "Miss Jenny"		Peninsula Road	Oxnard	Ventura	93030	Oxnard Harbor
VCCMP 02 - 17	Ventura	4	Carl Moyer	Marine Vessel "Sea View"		Channel Islands Blvd	Oxnard	Ventura	93030	Channel Island Harbor
VCCMP 02 - 21	Ventura	4	Carl Moyer	Marine Vessel "Arlene M"		Victoria Avenue	Oxnard	Ventura	93030	Oxnard Harbor
VCCMP 01 - 22	Ventura	4	Carl Moyer	Marine Vessel "Golden Eagle"		Spinnaker Drive	Ventura	Ventura	93001	Ventura Harbor
VCCMP 02 - 22	Ventura	4	Carl Moyer	Marine Vessel "Golden Eagle"		Spinnaker Drive	Ventura	Ventura	93001	Ventura Harbor
VCCMP 02 - 24	Ventura	4	Carl Moyer	Marine Vessel "Speed Twin"		Victoria Avenue	Oxnard	Ventura	93030	Oxnard Harbor
VCCMP 02 - 24	Ventura	4	Carl Moyer	Marine Vessel "Speed Twin"		Victoria Avenue	Oxnard	Ventura	93030	Oxnard Harbor
VCCMP 02 - 26	Ventura	4	Carl Moyer	Marine Vessel "Capture"		Victoria Avenue	Oxnard	Ventura	93030	Oxnard Harbor
VCCMP 02 - 27	Ventura	4	Carl Moyer	Marine Vessel "Genesis"		Channel Islands Blvd	Oxnard	Ventura	93030	Channel Island Harbor
VCCMP 02 - 28	Ventura	4	Carl Moyer	Marine Vessel "Kathryn Ann"		Channel Islands Blvd	Oxnard	Ventura	93030	Channel Island Harbor
VCCMP 02 - 29	Ventura	4	Carl Moyer	Marine Vessel "Merlin"		Channel Islands Blvd	Oxnard	Ventura	93030	Channel Island Harbor

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Project Number	Vessel Type (fishing boat, tug boat, ferry, cruise ship, etc.)	Engine Type (Category 1, Category 2 or Auxiliary)	Project Type (new, repower, retrofit)	Baseline Cost	Reduced (LEE) Engine Cost	Grant Request Per Engine	Number of Engines	Total Project Grant Request	Emission Calculation Methodology (fuel, hours: must have hour meter)	Hour Meters[2] ? (yes/no)	Baseline Fuel Consumption (gal/yr)	Baseline Annual Hours of Operation
VCCMP 02 - 14	Fishing Boat (Sport)	Category 1	Repower	$12,400	$51,850	$39,450	1	$39,450	fuel	yes	7,500	
VCCMP 02 - 14	Fishing Boat (Sport)	Auxiliary	Repower	$4,800	$16,900	$12,100	1	$12,100	fuel	yes	2,000	
VCCMP 02 - 15	Fishing Boat (Commercial)	Category 1	Repower	$13,200	$37,339	$24,139	1	$24,139	fuel	yes	4,000	
VCCMP 02 - 17	Fishing Boat (Light Boat)	Category 1	Repower	$7,400	$38,100	$30,700	1	$30,700	fuel	yes	4,300	
VCCMP 02 - 21	Fishing Boat (Lobster)	Category 1	Repower	$5,400	$26,500	$21,100	1	$21,100	fuel	yes	3,500	
VCCMP 01 - 22	Fishing Boat (Commercial)	Category 1	Repower	$19,200	$69,270	$50,070	1	$50,070	fuel	yes	10,000	
VCCMP 02 - 22	Fishing Boat (Commercial)	Auxiliary	Repower	$5,200	$18,700	$13,500	1	$13,500	fuel	yes	2,000	
VCCMP 02 - 24	Fishing Boat (Sport)	Auxiliary	Repower	$1,700	$23,400	$20,000	1	$20,000	fuel	yes	2,200	
VCCMP 02 - 24	Fishing Boat (Sport)	Auxiliary	Repower	$1,700					fuel	yes	2,200	
VCCMP 02 - 26	Fishing Boat (Lobster)	Category 1	Repower	$6,404	$26,665	$20,261	1	$20,261	fuel	yes	2,500	
VCCMP 02 - 27	Fishing Boat (Commercial)	Category 1	Repower	$6,417	$25,291	$18,874	1	$18,874	fuel	yes	2,500	
VCCMP 02 - 28	Fishing Boat (Urchin Diver)	Category 1	Repower	$17,918	$47,100	$29,182	1	$29,182	fuel	yes	6,500	
VCCMP 02 - 29	Fishing Boat (Commercial)	Category 1	Repower	$7,781	$51,100	$43,319	1	$43,319	fuel	yes	11,000	

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Project Number	Percent Operation in District	Baseline Engine Serial Number	Baseline Fuel Type (diesel, cng, lng, lpg, electric)	Baseline Engine Model	Baseline Model Year	Preliminary Baseline Load Factor Moyer Table (%) (default 0.43)	Adjusted Baseline Load Factor (%)	Baseline Horsepower	Baseline Energy Consumption Factor (hp-hr/gal)	Preliminary Baseline NOx or NOx+NMHC EF (g/bhp-hr)	Factor for NOx Fraction (if not applicable, then type "1")
VCCMP 02 - 14	100%	Illegible	diesel	DDC GM 6 - 71	pre 1970	0.675	0.675	225	18.5	14.0	1
VCCMP 02 - 14	100%	Illegible	diesel	DDC GM 2 - 71	pre 1970	0.675	0.675	50	18.5	13.0	1
VCCMP 02 - 15	100%	Illegible	diesel	Caterpillar 3208T	1987	0.675	0.675	300	18.5	7.0	1
VCCMP 02 - 17	100%	Illegible	diesel	Volvo TMD 70B	pre 1970	0.675	0.675	220	18.5	7.0	1
VCCMP 02 - 21	100%	46094/4449	diesel	Volvo TMD 61	pre 1970	0.675	0.675	300	18.5	11.0	1
VCCMP 01 - 22	100%	Illegible	diesel	DDC GM 8V - 71	pre 1970	0.675	0.675	320	18.5	14.0	1
VCCMP 02 - 22	100%	Illegible	diesel	DDC GM 3 - 71	pre 1970	0.675	0.675	60	18.5	13.0	1
VCCMP 02 - 24	100%	Illegible	diesel	Onan 30kW	pre 1975	0.675	0.675	53	18.5	13.0	1
VCCMP 02 - 24	100%	Illegible	diesel	Perkins 30kW	pre 1975	0.675	0.000	53	18.5	13.0	1
VCCMP 02 - 26	100%	Illegible	diesel	Volvo TMD 41	1978	0.675	0.675	260	18.5	8.2	1
VCCMP 02 - 27	100%	Illegible	diesel	Cummins 6BTA	1978	0.675	0.675	260	18.5	11.0	1
VCCMP 02 - 28	100%	Illegible	diesel	Caterpillar 3208T	1978	0.675	0.675	260	18.5	7.0	1
VCCMP 02 - 29	100%	01Z07693	diesel	Caterpillar 3208T	1975	0.675	0.675	320	18.5	7.0	1

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Project Number	NOx Correction Factor for CA-FCF (5) (if not applicable, then type "1")	Adjusted Baseline NOx (g/bhp-hr)	Preliminary Baseline PM (g/bhp-hr)	PM Correction Factor for CA-FCF (5) (if not applicable, then type "1")	Adjusted Baseline PM (gm/bhp-hr)	Reduced (LEE) Engine Serial Number	Reduced (LEE) Engine Fuel Type (diesel, cng, lng, lpg, electric)	Reduced (LEE) Engine Model	Tier II? (yes or no)	Reduced (LEE) Fuel Consumption (gal/year)	Reduced (LEE) Hour of Operation (hr/year)
VCCMP 02 - 14	1	14.00	0.77	1.0	0.77	46347847	diesel	Cummins 6CTA 8.3 M3	yes	5,625	N/A
VCCMP 02 - 14	1	13.00	0.84	1.0	0.84	145358	diesel	Isuzu 4LE1	yes	1,500	N/A
VCCMP 02 - 15	1	7.00	0.53	1.0	0.53	46219781	diesel	Cummins 6BTA 5.9 M3	yes	3,000	N/A
VCCMP 02 - 17	1	7.00	0.55	1.0	0.55	46254573	diesel	Cummins 6CTA 8.3 M3	yes	3,225	N/A
VCCMP 02 - 21	1	11.00	0.53	1.0	0.53	46301700	diesel	Cummins 6BTA 5.9 M3	yes	2,625	N/A
VCCMP 01 - 22	1	14.00	0.74	1.0	0.74	46187181	diesel	Cummins 6CTA 8.3 M3	yes	7,500	N/A
VCCMP 02 - 22	1	13.00	0.84	1.0	0.84	139013	diesel	Isuzu 4JG1	yes	1,500	N/A
VCCMP 02 - 24	1	13.00	0.84	1.0	0.84	203091	diesel	Isuzu 4LEP1	yes	3,300	N/A
VCCMP 02 - 24	1	13.00	0.84	1.0	0.84		diesel		yes		
VCCMP 02 - 26	1	8.17	0.38	1.0	0.38	2041065090	diesel	Volvo TAMD Marine Diesel	yes	1,875	N/A
VCCMP 02 - 27	1	11.00	0.55	1.0	0.55	46259870	diesel	Cummins 6BTA 5.9 M3	yes	1,875	N/A
VCCMP 02 - 28	1	7.00	0.38	1.0	0.38	46349670	diesel	Cummins 6CTA 8.3 M3	yes	4,875	N/A
VCCMP 02 - 29	1	7.00	0.53	1.0	0.53	46282550	diesel	Cummins 6CTA 8.3 M3	yes	8,250	N/A

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Project Number	Reduced (LEE) Engine Model year	Reduced (LEE) Engine Horsepower	Reduced (LEE) Engine Load Factor %	Reduced (LEE) Energy Consumption Factor (hp-hr/gal)	Preliminary Reduced (LEE) NOx or NOx+NMHC (g/bhp-hr) Certification Standard from EO	Factor for NOx Fraction (if not applicable, then type "1")	Factor for CA-FCF(5) (if not applicable, then type "1")	Adjusted Reduced (LEE) NOx (g/bhp-hr)	Preliminary Reduced (LEE) PM (gm/bhp-hr)	Factor for CA-FCF (5) (if not applicable, then type "1")
VCCMP 02 - 14	2004	255	0.60	18.5	4.90	1.00	1.00	4.90	0.15	1.00
VCCMP 02 - 14	2004	52	0.65	18.5	5.60	1.00	1.00	5.60	0.30	1.00
VCCMP 02 - 15	2003	315	0.64	18.5	4.80	1.00	1.00	4.80	0.15	1.00
VCCMP 02 - 17	2003	255	0.58	18.5	4.90	1.00	1.00	4.90	0.15	1.00
VCCMP 02 - 21	2003	315	0.64	18.5	4.80	1.00	1.00	4.80	0.15	1.00
VCCMP 01 - 22	2003	255	0.85	18.5	4.90	1.00	1.00	4.90	0.15	1.00
VCCMP 02 - 22	2003	51	0.79	18.5	5.60	1.00	1.00	5.60	0.30	1.00
VCCMP 02 - 24	2004	80	0.45	18.5	5.60	1.00	1.00	5.60	0.30	1.00
VCCMP 02 - 24										
VCCMP 02 - 26	2004	180	0.98	18.5	4.90	1.00	1.00	4.90	0.15	1.00
VCCMP 02 - 27	2003	260	0.68	18.5	4.90	1.00	1.00	4.90	0.15	1.00
VCCMP 02 - 28	2004	350	0.50	18.5	4.80	1.00	1.00	4.80	0.15	1.00
VCCMP 02 - 29	2003	350	0.62	18.5	4.80	1.00	1.00	4.80	0.15	1.00

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Project Number	Adjusted Reduced (LEE) Engine PM (gm/bhp-hr)	Project Life (years)	Incremental Cost per Unit	Incremental Cost for Total Project	Maximum Award Based on Incremental Cost and Grant Request	% Increase in Horse Power	Capital Recovery	Per Vessel Baseline NOx Emissions (tons/year)	Per Vessel Reduced (LEE) NOx Emissions (tons/year)	Per Equipmnent NOx Reduction (ton/year)	Project NOx Reductions (total tons/year)	Lifetime NOx Reductions (tons)
VCCMP 02 - 14	0.15	10	$39,450	$39,450	$39,450	11.76%	0.117	2.14	0.56	1.58	1.579	15.79
VCCMP 02 - 14	0.30	10	$12,100	$12,100	$12,100	3.85%	0.117	0.53	0.17	0.36	0.359	3.59
VCCMP 02 - 15	0.15	10	$24,139	$24,139	$24,139	4.76%	0.117	0.57	0.29	0.28	0.277	2.77
VCCMP 02 - 17	0.15	10	$30,700	$30,700	$30,700	13.73%	0.117	0.61	0.32	0.29	0.292	2.92
VCCMP 02 - 21	0.15	10	$21,100	$21,100	$21,100	4.76%	0.117	0.79	0.26	0.53	0.528	5.28
VCCMP 01 - 22	0.15	10	$50,070	$50,070	$50,070	-25.49%	0.117	2.85	0.75	2.11	2.106	21.06
VCCMP 02 - 22	0.30	10	$13,500	$13,500	$13,500	-17.65%	0.117	0.53	0.17	0.36	0.359	3.59
VCCMP 02 - 24	0.30	10	$20,000	$20,000	$20,000	-32.50%	0.117	1.17	0.38	0.79	0.790	7.90
VCCMP 02 - 24												
VCCMP 02 - 26	0.15	10	$20,261	$20,261	$20,261	-44.44%	0.117	0.42	0.19	0.23	0.229	2.29
VCCMP 02 - 27	0.15	10	$18,874	$18,874	$18,874	0.00%	0.117	0.56	0.19	0.37	0.373	3.73
VCCMP 02 - 28	0.15	10	$29,182	$29,182	$29,182	25.71%	0.117	0.93	0.48	0.45	0.451	4.51
VCCMP 02 - 29	0.15	10	$43,319	$43,319	$43,319	8.57%	0.117	1.57	0.81	0.76	0.763	7.63

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Project Number	% Reduction NOx	Per Vessel Baseline PM Emissions (tons/year)	Per Vessel Reduced (LEE) PM Emissions (tons/year)	Per Vessel PM Reductions (tons/year)	Project PM Reductions (total tons/year)	Lifetime PM Reductions (tons)	% Reduction PM	Cost-Effectiveness Limit ($/ton)	Cost-Effectiveness ($/ton)	Maximum Award considering CE Limit AND funding request	Project Cost-Effectiveness based on Maximum Award ($/ton)
VCCMP 02 - 14	74%	0.118	0.017	0.101	0.101	1.01	85%	$13,600	$2,929	$39,450	$2,929
VCCMP 02 - 14	68%	0.034	0.009	0.025	0.025	0.25	73%	$13,600	$3,952	$12,100	$3,952
VCCMP 02 - 15	49%	0.043	0.009	0.034	0.034	0.34	79%	$13,600	$10,204	$24,139	$10,204
VCCMP 02 - 17	48%	0.048	0.010	0.038	0.038	0.38	80%	$13,600	$12,344	$30,700	$12,344
VCCMP 02 - 21	67%	0.038	0.008	0.030	0.030	0.30	79%	$13,600	$4,683	$21,100	$4,683
VCCMP 01 - 22	74%	0.151	0.023	0.128	0.128	1.28	85%	$13,600	$2,788	$50,070	$2,788
VCCMP 02 - 22	68%	0.034	0.009	0.025	0.025	0.25	73%	$13,600	$4,410	$13,500	$4,410
VCCMP 02 - 24	68%	0.075	0.020	0.055	0.055	0.55	73%	$13,600	$2,969	$20,000	$2,969
VCCMP 02 - 24											
VCCMP 02 - 26	55%	0.019	0.006	0.014	0.014	0.14	70%	$13,600	$10,365	$20,261	$10,365
VCCMP 02 - 27	67%	0.028	0.006	0.022	0.022	0.22	80%	$13,600	$5,925	$18,874	$5,925
VCCMP 02 - 28	49%	0.050	0.015	0.035	0.035	0.35	70%	$13,600	$7,591	$29,182	$7,591
VCCMP 02 - 29	49%	0.119	0.025	0.094	0.094	0.94	79%	$13,600	$6,659	$43,319	$6,659

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Project Number	Notes/Pending	Flags	Another Flag	Yet Another Flag
VCCMP 02 - 14		In-basin OK	Percent Reduction OK	Tier II OK
VCCMP 02 - 14		In-basin OK	Percent Reduction OK	Tier II OK
VCCMP 02 - 15		In-basin OK	Percent Reduction OK	Tier II OK
VCCMP 02 - 17		In-basin OK	Percent Reduction OK	Tier II OK
VCCMP 02 - 21		In-basin OK	Percent Reduction OK	Tier II OK
VCCMP 01 - 22		In-basin OK	Percent Reduction OK	Tier II OK
VCCMP 02 - 22		In-basin OK	Percent Reduction OK	Tier II OK
VCCMP 02 - 24		In-basin OK	Percent Reduction OK	Tier II OK
VCCMP 02 - 24				
VCCMP 02 - 26		In-basin OK	Percent Reduction OK	Tier II OK
VCCMP 02 - 27		In-basin OK	Percent Reduction OK	Tier II OK
VCCMP 02 - 28		In-basin OK	Percent Reduction OK	Tier II OK
VCCMP 02 - 29		In-basin OK	Percent Reduction OK	Tier II OK