

DOCKET A-2001-11

Control of Emissions of Air Pollution From New Marine Compression-Ignition Engines at or Above 30 Liters Per Cylinder

Subject Matter

- I. Notice of Intent or ANPRM**
- II. Items Considered in Developing Proposal**
- III. Proposal**
- IV. Additional Items Considered After Proposal in Developing
Final Rule**
- V. Final Action**

Category: II-A
EPA Studies and Contractor Reports

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-A-01	01-15-02	“Exhaust Emissions: Next Steps for Low-Speed Two-Stroke Engines”, Marine News	2000
II-A-02	02-26-02	“The New Low-Emission Heavy Fuel Oil Engines of Caterpillar Motoren”, U. Schlemmer-Kelling, New Technology Introduction, and M. Rautenstrach, Research & Development, Caterpillar Motoren GmbH & Co, KG; CIMAC, International Council on Combustion Engines, Congress 2001; Hamburg, Germany *COPYRIGHTED *CANNOT BE REPRODUCED	2001
II-A-03	02-26-02	“Advanced Optimisation of Common-Rail Diesel Engine Combustion”; Chr. Philipp, Dr. A. Schneemann, Dr. M. Willmann, Dr. M. Kurreck; MTU Motoren-und Turbinen-Union Friedrichshafen GmbH; CIMAC, International Council on Combustion Engines, Congress 2001; Hamburg, Germany *COPYRIGHTED *CANNOT BE REPRODUCED	2001
II-A-04	02-26-02	“The Development of Very Low Fuel Consumption Medium Speed Diesel Engine”, S. Okada, et. al; Yanmar Diesel Engine, Company, Ltd., CIMAC, International Council on Combustion Engines, Congress 2001; Hamburg, Germany *COPYRIGHTED *CANNOT BE REPRODUCED	2001
II-A-05	02-26-02	“Improving the Soot-NOx-BSFC Trade-Off Of Medium Speed, 4-Stroke Diesel Engine; Dr.-Ing I. G. Heider, Basic Development & Dr.-Ing I.P. Eilts, Head of Department; MAN B&W Diesel Aktiengesellschaft, Augsburg, Germany; CIMAC, International Council on Combustion Engines, Congress 2001; Hamburg, Germany *COPYRIGHTED *CANNOT BE REPRODUCED	2001
II-A-06	02-26-02	“Development of ‘NEO’ Medium Speed Diesel Engines”, T. Sato, et.al., Niigata Engineering Company, Ltd.; CIMAC, International Council on Combustion Engines, Congress 2001; Hamburg, Germany *COPYRIGHTED *CANNOT BE REPRODUCED	2001
II-A-07	02-26-02	“The Sulzer RTA-Low Speed Engine Range: Today and in the Future”, K. Aeberli, Senior Vice President, Technology; & N. Mikulicic, Vice President, Technology, Wartsila Switzerland Ltd.; Winterthur, Switzerland; CIMAC, International Council on Combustion Engines, Congress 2001; Hamburg, Germany *COPYRIGHTED *CANNOT BE REPRODUCED	2001

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Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-A-08	02-26-02	“Assessment of Emission Control Technology For EPA Category 3 Commercial Marine Diesel Engines”, M.N. Ingalls & S.G. Fritz, Southwest Research Institute, San Antonio, TX (Final Report)	09-01
II-A-09	02-22-02	“Economic Instruments for Reducing Emissions From Sea Transport”, P. Kageson, The Swedish NGO Secretariat on Acid Rain; European Federation For Transport & Environment; European Environmental Bureau	1999
II-A-10	02-22-02	Brochure “Do Your Part to Improve Air Quality”, Smoke Stack Emissions Program; The Port of Long Beach, CA	Undated
II-A-11	02-22-02	Rule 401, Visible Emissions; South Coast Air Quality Management District, CA	11-09-01
II-A-12	02-22-02	Ports of Los Angeles & Long Beach Navigational Alert	2001
II-A-13	02-26-02	“Development of the Sustainable Engine”, D. Paro, Senior Vice President, Wartsila Corporation, Vaasa, Finland; CIMAC, International Council on Combustion Engines, Congress 2001; Hamburg, Germany *COPYRIGHTED *CANNOT BE REPRODUCED	2001
II-A-14	03-04-02	“Fuel Injection System & Control Integration”, M.E. Moncelle, New Technology Introduction Manager, Catepillar, Peoria, IL; CIMAC, International Council on Combustion Engines, Congress 2001; Hamburg, Germany *COPYRIGHTED *CANNOT BE REPRODUCED	2001
II-A-15	03-04-02	“The Intelligent Engine Design Status and Service Experience”, P. Sorensen, Senior Manager, Electronics & Software, Research & Development, & P. Sunn Pedersen, Vice President, Research & Development, MAN B&W Diesel A/S, Denmark; CIMAC, International Council on Combustion Engines, Congress 2001; Hamburg, Germany *COPYRIGHTED *CANNOT BE REPRODUCED	2001
II-A-16	03-11-02	“Prevention of Air Pollution From Ships; Revision of the NOx Technical Code Tiers 2 Emission Limits for Diesel Marine Engines At or Above 130 kW”,(MEPC44/11/7); Submitted by the U.S.; Marine Environment Protection Committee; 44 th Session; Agenda Item 11, International Maritime Organization (IMO)	12-24-99

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EPA Studies and Contractor Reports

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-A-17	03-11-02	Davies, M.E., et.al., "Study on the Economic, Legal, Environmental and Practical Implication of a European Union System To Reduce Ship Emissions of SO2 and NOx"; Final Report for European Commission Contract B4-3040/98/000839/MAR/B1; BMT Murray Fenton Edon Liddiard Vince Ltd.; *Also available at website: http://www.europa.eu.int/comm/environment/air/transport.htm#3	08-2000
II-A-18	03-11-02	Dr. J.J. Richardson, et.al., "Maritech Program Impacts On Global Competitiveness of the U.S. Shipbuilding Industry and Navy Ship Construction"; A Potomac Institute for Policy Studies Report: PIPS-98-4	07-01-98
II-A-19	03-11-02	P. Koman, Environmental Scientist, Assessment & Standards Division (ASD), Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA; "Manufacturer Information Regarding Category 3 Marine Diesel Vessel Prices, Production, Employment & Sales Information"	02-22-02
II-A-20	03-11-02	J.M. Revelt, EPS, Assessment & Standards Division (ASD), Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA; "Incorporation by Reference Rulemaking Dockets A-92-28 & A-97-50"	03-06-02
II-A-21	03-11-02	International Council of Cruise Lines (ICCL) Industry Standard E-01-01 (Revision 1), "Cruise Industry Waste Management Practices & Procedures"	12-01-01
II-A-22	03-11-02	U.S. General Accounting Office (GAO), Report to Congressional Requesters; "Marine Pollution: Progress Made to Reduce Marine Pollution By Cruise Ships, But Important Issues Remain"; (GAO/RCED-00-48)	02-2000
II-A-23	03-11-02	Emission Standards Division (ESD), Office of Air & Radiation (OAR), U.S. EPA; "Surface Coating Operations at Shipbuilding & Ship Repair Facilities--Background Information for Proposed Standards" EPA 453-D-94-011a	06-24-94
II-A-24	03-11-02	U.S. Census Bureau, 1997 Economic Census, Manufacturing-Industry Series; "Introduction to the Economic Census"	1997
II-A-25	03-11-02	J.M. Revelt, EPS, Assessment & Standard Division (ASD), Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U. S. EPA; Industry Information, Chamber of Shipping of America Tele-Conference, 11-01-01	03-06-02
II-A-26	03-11-02	American Shipbuilding Association, "The Defense Shipbuilding Industrial Base-An Industry At Risk"	05-2001

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Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-A-27	03-11-02	F. Losey, American Shipbuilding Association, Re: International Shipbuilding Aid	12-20-01
II-A-28	03-11-02	European Commission, Directorate-General for Environment; Directorate C-Environment & Health; Unit C1-Air & Noise; "Discussion Paper: A Community Strategy on Air Pollution From Seagoing Ships"; Brussels, Belgium Also available at web site: http://europa.eu.int/environment/air/0101discussion_paper.pdf	01-2001
II-A-29	03-15-02	Corning's Clean Diesel Workshop Agenda; Sept.27-29, 1999, Corning, New York	09-99
II-A-30	03-15-02	International Petroleum Information, U.S. Energy Information Administration, U.S. Department of Energy (DOE) Also available at website: http://www.eid.doe.gov/emeu/international/petroleu.html	Undated
II-A-31	03-15-02	"Bunker Prices", from web site http://www.BunkerNews.com	01-24-01
II-A-32	03-15-02	Wolcott, D.C., et al; Committee on Oil Pollution Act of 1990 (Section 4115) Implementation Review, Marine Board, Commission on Engineering & Technical Systems, National Research Council, National Academy Press, Washington, DC; "Double-Hull Tanker Legislation: An Assessment of the Oil Pollution Act of 1990" Also available at web site: http://www.nap.edu/readingroom/books/tanker/ *COPYRIGHTED *CANNOT BE REPRODUCED	1998
II-A-33	03-15-02	G. Steinfeld, et.al; Energy Research Corporation, Danbury, CT; "Direct Carbonate Fuel Cell For Ship Service Application"	Undated
II-A-34	03-15-02	Z. Karni & P. Fontneau, John J. McMullen Associates, Inc., Alexandria, VA; S. Allen & R. Sedat, US Coast Guard R&D Center, Groton, CT; H. Ghezal-Ayagh, & et.al., FuelCell Energy, Inc., Danbury, CT; M.Lukas, Pennsylvania State University, University Park, PA; "Marine Application of Fuel Cells"	Undated
II-A-35	03-15-02	The Society of Naval Architects and Marine Engineers; T & R News; "Fuel Cells For Commercial Ships"	Undated
II-A-36	03-15-02	C. Rosgren, V.P. Engine Design, Technology Division, Wartsila Corporation, Switzerland; The Ship Power Supplier; "Common Rail on Wartsila Four-Stroke Engines"	2001
II-A-37	03-15-02	S. Fankhauser, Manager, Engine Automation, & Project Manager Sulzer RT-flex; Wartsila, Switzerland Ltd; The Ship Power Supplier; "World's First Common-Rail Low-Speed Engine Goes To Sea"	2001

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Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-A-38	03-15-02	Z. Bazari, Lloyd's Register; B.A. French, Ford Motor Company; Society of Automotive Engineers (SAE) Technical Paper Series, 930592; "Performance and Emissions Trade-Offs for a HSDI Diesel Engine-An Optimization Study" *COPYRIGHTED *CANNOT BE REPRODUCED	Undated
II-A-39	03-15-02	M. Duernholz, FEV-Motorentechnik GmbH & Co., RG; Society of Automotive Engineers (SAE) Technical Paper Series, 920725; "Exhaust-Gas Recirculation-A Measure to Reduce Exhaust Emissions of DI Diesel Engines" *COPYRIGHTED *CANNOT BE REPRODUCED	Undated
II-A-40	03-15-02	M. Ghaffarpour & R. Baranescu, Navistar International Transportation Corp.; Society of Automotive Engineers (SAE) Technical Paper Series, 960845; International Congress & Exposition, Detroit, MI; February 26-29, 1996; "NOx Reduction Using Injection Rate Shaping and Intercooling in Diesel Engines" *COPYRIGHTED *CANNOT BE REPRODUCED	1996
II-A-41	03-15-02	D.A. Pierpoint & R.D. Reitz, University of Wisconsin-Madison; Society of Automotive Engineers (SAE) Technical Paper Series, 950604; International Congress & Exposition, Detroit, MI; February 27-March 2, 1995; Reprinted from: Diesel Engine Combustion Process (SP-1092); "Effects of Injection Pressure and Nozzle Geometry on D.I. Diesel Emissions and Performance" *COPYRIGHTED *CANNOT BE REPRODUCED	1995
II-A-42	03-15-02	N. Uchida, Hino Motors Ltd; Y. Daisho & T. Saito, Waseda University; H. Sugano, Nippon Oil Company, Ltd; Society of Automotive Engineers (SAE) Technical Paper Series, 93061; "Combined Effects of EGR and Supercharging on Diesel Combustion and Emissions" *COPYRIGHTED *CANNOT BE REPRODUCED	Undated
II-A-43	03-15-02	D.T. Montgomery, et.al., University of Wisconsin-Madison; Society of Automotive Engineers (SAE) Technical Paper Series, 960316, "Six-Mode Cycle Evaluation of the Effect of EGR and Multiple Injections on Particulate and NOx Emissions from D.I. Diesel Engine" *COPYRIGHTED *CANNOT BE REPRODUCED	1996

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II-A-44	03-15-02	D.A. Pierpoint, et.al., University of Wisconsin-Madison; Society of Automotive Engineers (SAE) Technical Paper Series, 950217; International Congress and Exposition, Detroit, MI, February 27-March 2, 1995; "Reducing Particulate and NOx Using Multiple Injections and EGR in a D.I. Diesel" *COPYRIGHTED L *CANNOT BE REPRODUCED	1995
II-A-45	03-15-02	O. Uyehara, University of Wisconsin; Society of Automotive Engineers (SAE) Technical Paper Series, 920695; "Factors that Affect NOx and Particulates in Diesel Engine Exhaust-Part II" *COPYRIGHTED *CANNOT BE REPRODUCED	Undated
II-A-46	03-15-02	P. Herzog, et.al., AVL LIST, GmbH, Graz, Austria; Society of Automotive Engineers (SAE) Technical Paper Series, 920470; International Congress & Exposition, Detroit, MI; "NOx Reduction Strategies for DI Diesel Engines" *COPYRIGHTED *CANNOT BE REPRODUCED	Undated
II-A-47	03-18-02	J.M. Revelt, Assessments & Standards Division (ASD), Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA; Attachments: <i>Santa Barbara County Air Quality News</i> , Issue 62, July-August 2001; <i>Business Oriented Air Quality News</i> , July-August 2001; <i>The Need to Reduce Marine Shipping Emissions</i> , D. Allard, Director, & K. Patton, Division Manager, Santa Barbara County Air Pollution Control District, January 2002	07-01 01-02
II-A-48	03-22-01	<i>Diesel & Gas Turbine Worldwide Catalog: 66th Annual Product & Buyer's Guide For Engine Power Markets</i> ; Vol.66; p.2-47; Waukesha, WI; "2001 Basic Specifications Gasoline Engines" *COPYRIGHTED *CANNOT BE REPRODUCED	. . 04-01
II-A-49	04-05-02	"Emission Factors for Compression Ignition Nonroad Engines Operated on No.2 Highway and Nonroad Diesel Fuel," Office of Mobile Sources, U.S. Environmental Protection Agency (EPA420-R-98-001)	03-98
II-A-50	04-12-02	"SHAPING THE COMBUSTION PROCESS BY UTILISATION OF HIGH PRESSURE INJECTION: Test Results and Calculations Concerning Improvements of Engine Economics By Reduction of Combustion Pressure;" H. Fiedler, President, FMC Kiel GmbH, Aken/Elbe, Germany; International Council on Combustion Engines, Congress 2001; Hamburg, Germany	2001

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Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-A-51	04-29-02	“Incorporation of the ‘ <i>Ozone and Carbon Monoxide 1997-1999 Air Quality Update</i> ’ from EPA’s Trends website into Docket A-2001-11;” J. Mueller, Mechanical Engineer, Assessment & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA *(Docket A-2000-01, Item II-A-80)	04-26-02
II-A-52	04-29-02	“Incorporation of the ‘ <i>Review of the National Ambient Air Quality Standards for Particulate Matter: Policy Assessment of Scientific and Technical Information OAQPS Staff Paper; EPA-425/R-96-013</i> ’ into Docket A-2001-11;” J. Mueller, Mechanical Engineer, Assessment & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA *(Docket A-99-06, Items II-A-18, 19, 20, & 23)	04-26-02
II-A-53	04-29-02	“Incorporation of ‘ <i>Air Quality Criteria for Ozone and Related Photochemical Oxidants, EPA/600/P-93/004aF</i> ’ into Docket A-2001-11;” J. Mueller, Mechanical Engineer, Assessment & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA *(Docket A-99-06, Items II-A-15, 16, & 17)	04-26-02
II-A-54	04-29-02	“Incorporation of ‘ <i>Review of National Ambient Air Quality Standards for Ozone, Assessment of Scientific and Technical Information, OAQPS Staff Paper, EPA-452/R-96-007</i> ’ into Docket A-2001-11;” J. Mueller, Mechanical Engineer, Assessment & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA *(Docket A-99-06, Item II-A-22)	04-26-02
II-A-55	04-29-02	“Incorporation the ‘ <i>Regulatory Impact Analysis: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements, Document EPA420-R-00-026, December 2000</i> ’ into Docket A-2001-11;” J. Mueller, Mechanical Engineer, Assessment & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA *(Docket A-2000-01, Item II-A-13)	04-26-02
II-A-56	04-29-02	“Incorporation of ‘ <i>Air Quality Criteria for Carbon Monoxide</i> ’ into Docket A-2001-11;” J. Mueller, Mechanical Engineer, Assessment & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA *(Docket A-2000-01, Item II-A-29)	04-26-02
II-A-57	04-29-02	“Incorporation of ‘ <i>Human Health Benefits from Sulfate Reductions Under Title IV of the Clean Air Act Amendments</i> ’ into Docket A-2001-11;” J. Mueller, Mechanical Engineer, Assessment & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA *(Docket A-2000-01, Item II-A-32)	04-26-02

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Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-A-58	04-29-02	“Incorporation of portions of the ‘ <i>National Air Quality and Emissions Trends Report, 1998, March 2000</i> ’ into Docket A-2001-11;” J. Mueller, Mechanical Engineer, Assessment & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA *(Docket A-2000-01, Item II-A-63)	04-26-02
II-A-59	04-29-02	“Incorporation of portions of the ‘ <i>National Air Quality and Emissions Trends Report, 1999, EPA, 2001</i> ’ into Docket A-2001-11;” J. Mueller, Mechanical Engineer, Assessment & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA *(Docket A-2000-01, Item II-A-64)	04-26-02
II-A-60	04-29-02	“Incorporation of Carbon Monoxide Data from ‘ <i>National Air Quality and Emissions Trends Report, 1998, EPA, 2001</i> ’ into Docket A-2001-11;” J. Mueller, Mechanical Engineer, Assessment & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA *(Docket A-2000-01, Item II-A-72)	04-26-02
II-A-61	04-29-02	“Incorporation of the ‘ <i>Summary of Absolute Modeled and Modeled-Adjusted Estimates of Fine Particulate Matter for Selected Years</i> ’ into Docket A-2001-11;” J. Mueller, Mechanical Engineer, Assessment & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA *(Docket A-2000-01, Item II-B-14)	04-26-02
II-A-62	04-29-02	“Incorporation of the ‘ <i>Summary of Modeled-Adjusted Ambient Concentrations for Certain Levels of Ground-Level Ozone Over Prolonged Periods</i> ’ into Docket A-2001-11;” J. Mueller, Mechanical Engineer, Assessment & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA *(Docket A-2000-01, Item II-B-13)	04-26-02
II-A-63	04-29-02	“Incorporation of the ‘ <i>Summary of 1999 Ambient Concentrations of Fine Particulate Matter</i> ’ into Docket A-2001-11;” J. Mueller, Mechanical Engineer, Assessment & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA *(Docket A-2000-01, Item II-B-12)	04-26-02
II-A-64	04-29-02	“Analysis of Commercial Marine Vessels Emissions and Fuel Consumption Data, EPA420-R-00-002;” Office of Transportation & Air Quality, U.S. EPA; Prepared for EPA under contract to Sierra Research by Energy & Environmental Analysis, Inc., EPA Contract No. 68-C7-0051, Work Assignment No.1-10	02-2000
II-A-65	04-29-02	“Commercial Marine Emissions Inventory for EPA Category 2 and 3 Compression Ignition Marine Engines in United States Continental and Inland Waterways;” Prepared by J. J. Corbett, Jr., et.al.; Department of Engineering & Public Policy, Carnegie-Mellon University, Pittsburg, PA; prepared for U.S. EPA, Office of Mobile Sources, Ann Arbor, MI; (Order No. 8A-0526-NATX)	08-21-98

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Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-A-66	04-30-02	“2001 Directory of Marine Diesel Engines,” used as “Material Used in Industry Characterization,” L. Wehrly, Mechanical Engineer, Assessment & Standards Division, Office of Transportation Air Quality, U.S. EPA	04-08-02
II-A-67	04-30-02	“Commercial Marine Emission Inventory Development, Final Report,” Prepared for: Office Of Transportation Air Quality, U.S. EPA, Prepared by: E.H. Pechan & Associates, Springfield, VA; & ENVIRON International Corporation, Novato, CA (EPA Contract No. 68-D-00-265, Work Assignment 1-11, Pechan Report No. 02.04.002/9012.111) (Appendix A on computer disk)	04-2002
II-A-68	04-30-02	U.S. EPA <i>Federal Register</i> Notice “40 CFR Parts 80 & 86, Control of Emissions of Hazardous Air Pollutants From Mobile Sources; Final Rule” (Docket A-2000-12)	03-29-01
II-A-69	04-30-02	Docket A-2000-12 “Technical Support Document: Control of Emissions of Hazardous Air Pollutants From Motor Vehicles & Motor Vehicle Fuels,” Assessment & Standards Division (ASD), Office of Transportation, U.S. EPA (EPA420-R-00-023)	12-2000
II-A-70	05-13-02	“Annual Analysis”, <u>Motorship</u> .	06-99
II-A-71	05-13-02	“A Review of Meteorological Studies Pertaining to Southern California Offshore Ship Emissions and Their Effect on the Mainland,” L. Eddington, et. al.; Geophysics Branch, Test Operations Division, Naval Air Warfare Center, Weapons Division, Point Mugu, CA (Geophysical Sciences Technical Note No. 200)	02-97
II-A-72	11-12-02	Report - Wartsila Corporation, “Effective, Evolving and Envisaged Emission Control Technologies for Marine Propulsion Engines”, Daniel Paro, Senior Vice President, Technology, Wartsila Corporation	?
II-A-73	12-30-02	Report to US Environmental Protection Agency, Assessment and Standards Division, 2000 Traverwood Drive, Ann Arbor, Michigan 48105 prepared by Louis Browning and Robb Barnitt, Arthur D. Little - Acurex Environmental, 10061 Bubb Road, Cupertino, California 95014 re “Emission Reduction Technology Costs for Category 3 Marine Diesel Engines” - Draft Report	3/2002

Category: II-B
EPA Factual Memoranda

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-B-01	03-11-02	<p>J. Armstrong, Director, Vehicle Programs & Compliance Division (VPCD), Office of Air & Radiation, U.S. EPA; Re: "Guidance for Certifying to Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)", VPCD-99-02 (Marine)</p> <p>*Also available at website: http://www.epa.gov/otaq/regs/nonroad/marine/ci/imolettr.pdf</p>	01-19-99
II-B-02	03-11-02	<p>K. Schmidt, Campaign Director; R. Long, Executive Director, Bluewater Network; "Bluewater Network's Petition to EPA to Address Cruise Ship Pollution"</p>	03-17-00
II-B-03	03-11-02	<p>R. Long, Executive Director, K. Schmidt, Campaign Director; Bluewater Network; Re: "Addendum to Bluewater Network's March 17, 2000 Petition to Address Pollution by Cruise Ships"</p>	08-02-00

**Category II -D:
EPA Correspondence Received from Persons Outside the Agency**

Document Number	Date Revd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-D-01	02-13-02	Dr. H. Mayer, EUROMOT, The European Association of Internal Combustion Engine Manufacturers, Frankfurt/Main, Germany to J. M. Revelt, Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA; "EUROMOT Reply to EPA Questionnaire For Engine Manufacturers Regarding Marine Diesel Engines Above 30 l/Cylinder"	01-31-02
II-D-02	04-24-02	J. R. Gladden, Staff Engineer, Core Technology, Lafayette Engine Center, Caterpillar, Inc.; to A. Stout, Assessment & Standards Division (ASD), Office of Transportation Air Quality (OTAQ), U.S. EPA; "Equation Forms for Emissions v. Displacement" & "Critical Issues for Emission Rules for Marine Engines >30 Liters/cylinder"	04-15-02
II-D-03	05-13-02	J.R, Gladden, Lafayette Engineer Center, Caterpillar Inc., Lafayette, IN; re: Critical Issues for Emissions Rules for Marine Engines >30 Liters/cylinder	03-11-02

Category II - E: EPA Memorandum of Meetings with Outside Groups

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-E-01	05-13-02	Meeting between MAN B&W and U.S. EPA	03-06-02
II-E-02	05-13-02	1 st (03-02-01), 2 nd (07-02-01), 3 rd (10-31-01), 4 th (01-31-02) Meetings with Earth Island Institute, pursuant to settlement agreement	various dates
II-E-03	05-13-02	Document has been moved to II-F-21	04-03-02
II-E-04	05-13-02	Document has been moved to II-F-22	04-17-02
II-E-05	05-13-02	Document has been moved to II-F-23	04-29-02
II-E-06	05-13-02	Document has been moved to II-F-24	04-29-02
II-E-07	05-13-02	Document has been moved to II-F-25	04-29-02
II-E-08	05-13-02	Document has been moved to II-F-26	04-29-02
II-E-09	05-13-02	Marine Environment Protection Committee, 47 th Session, Agenda Item; "PREVENTION OF AIR POLLUTION FROM SHIPS: Sulphur Monitoring 2000," Submitted by the Netherlands; MEPC47/INF	05-2001

Category II -F: Interagency Review Material

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-F-01	05-13-02	Correspondence between U.S. EPA and U.S. Maritime Administration, re: EPA's C-3 Marine Draft Notice of Proposed Rulemaking (NPRM); J.M. Revelt, Assessment & Standards Division (ASD), Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA	04-30-02
II-F-02	05-13-02	Materials forwarded to U.S. EPA by U.S. Navy; Re: EPA's Cat-3 Rule (DOD Comment) Draft Notice of Proposed Rulemaking (NPRM); from A.D. Ling, Senior Counsel, Office of the Assistant Secretary of Navy (Installations & Environment) to J.M. Revelt, Assessment & Standards Division (ASD), Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA; et.al.	04-30-02
II-F-03	05-13-02	Materials forwarded to U.S. EPA by U.S. Coast Guard; Re: C3 Rule by Capt. J. Lantz, USCG, Chief, Design & Engineering Standards (G-MSE) to K. Simon, Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA	04-30-02
II-F-04	05-13-02	Materials forwarded to the U.S. EPA by U.S. Department of State (DOS), Office of Management & Budget (OMB) re: Draft of Notice of Proposed Rulemaking; J.M. Revelt, Assessment & Standards Division (ASD), Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA	04-30-02
II-F-05	05-13-02	Materials submitted to U.S. Department of State (DOS) re: Staff Draft; J.M. Revelt, Assessment & Standards Division (ASD), Office of Transportation Air Quality (OTAQ), U.S. EPA	04-26-02
II-F-06	05-13-02	Materials forwarded to K. Simon, Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA by M.F. Hayes, U.S. Department of State (DOS) re: Ratification of EPA Preamble and Fact Sheet (04-29-02) (OTAQ), U.S. EPA	04-29-02 04-30-02
II-F-07	05-13-02	Materials Submitted to Office of Management & Budget (OMB) from J.M. Revelt, Assessment & Standards Division (ASD), Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA re: "Comparison of Annex VI to the International Convention on the Prevention of Pollution from Ships and the Proposed Rule Compliance Provisions"	04-17-02 04-18-02
II-F-08	05-13-02	Materials Submitted by EPA to the Office of Management & Budget (OMB) re: "Revised Section III.C.2-Foreign Flag Vessels" (Draft)	04-26-02
II-F-09	05-13-02	Materials Submitted to K. Simon, J.M. Revelt, & A. Stout; Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA by E. Haxthausen, Office of Management & Budget (OMB) re: C-3 Marine Comments	04-23-02

Category II -F: Interagency Review Material

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-F-10	05-13-02	Materials Submitted to K. Simon, J.M. Revelt, & A. Stout, Office of Transportation Air Quality (OTAQ), U.S. EPA by E. Haxthausen, Office of Information and Regulatory Affairs (OIRA), Office of Management & Budget (OMB) re: OMB's Comments on C-3 Marine Preamble (Sets 1-4)	04-22-02 04-23-02
II-F-11	05-13-02	Materials Forwarded to K. Simon, J.M. Revelt & A. Stout; Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA by E. Haxthausen, Office of Information and Regulatory Affairs (OIRA), Office of Management & Budget (OMB) re: Comments on C-3 Marine Preamble	04-22-02
II-F-12	05-13-02	Materials Submitted to EPA from E. Haxthausen, Office of Management & Budget (OMB) re: EPA C-3 Marine Rule; new language and update	04-26-02 04-27-02
II-F-13	05-13-02	E. Haxthausen, Natural Resources Branch, Office of Information & Regulatory Affairs (OIRA), Office of Management & Budget (OMB) to J.M. Revelt & K. Simon, Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA re: OMB's Comments Concerning EPA's April 24, 2002 Draft C-3 Marine Preamble	04-27-02
II-F-14	05-13-02	Materials Submitted to EPA from the Office of Management & Budget (OMB) re: OMB's Comments on EPA's C-3 Marine Preamble of April 24, 2002	04-28-02
II-F-15	05-13-02	E. Haxthausen, Natural Resources Branch, Office of Information & Regulatory Affairs (OIRA), Office of Management & Budget (OMB) to K. Simon, Office of Transportation Air Quality (OTAQ), U.S. EPA; re: Edits Concerning EPA's Draft C-3 Marine Preamble of April 29, 2002	04-29-02
II-F-16	05-13-02	Materials forwarded to K. Simon, Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA by E. Haxthausen, Office of Information & Regulatory Affairs (OIRA), Office of Management & Budget (OMB) re: OMB's Comments on EPA's C-3 Marine Preamble of April 29, 2002	04-29-02 04-30-02
II-F-17	05-13-02	Materials forwarded to K. Simon, Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA by E. Haxthausen, Office of Information & Regulatory Affairs (OIRA), Office of Management & Budget (OMB) re: OMB's Comments on EPA's Regulatory Support Document (RSD)	04-30-02
II-F-18	05-13-02	Documents forwarded to Office of Management & Budget (OMB) by J.M. Revelt, Assessments & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA; re: Drafts of Preamble, Regulations, & Regulatory Support Document (RSD) for the Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 liters/cylinder	03-14-02 03-30-02

Category II -F: Interagency Review Material

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
II-F-19	05-13-02	Documents forwarded to Office of Management & Budget (OMB) by J.M. Revelt, Assessments & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA; re: Drafts of Preamble, Regulations, & Regulatory Support Document (RSD) for the Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 liters/cylinder	04-05-02
II-F-20	05-13-02	Documents forwarded to Office of Management & Budget (OMB) by J.M. Revelt, Assessments & Standards Division (ASD), Office of Transportation Air Quality, U.S. EPA; re: Draft C3 Marine Preamble	04-24-02
II-F-21	05-13-02	Meeting with Office of General Counsel, Office of Management & Budget (OMB) with U.S. EPA	04-03-02
II-F-22	05-13-02	Meeting with Office of General Counsel, Office of Management & Budget (OMB) with U.S. EPA	04-17-02
II-F-23	05-13-02	Interagency Review Meeting with EPA representatives held on April 26, 2002	04-29-02
II-F-24	05-13-02	Interagency Review Meeting with EPA representatives held on April 22, 2002	04-29-02
II-F-25	05-13-02	Interagency Review Meeting with EPA representatives held on April 19, 2002	04-29-02
II-F-26	05-13-02	Interagency Review Meeting (OMB, Department of State, Department of Defense, U.S. Coast Guard, Department of Transportation) with U.S. EPA representatives	04-29-02

Category III- A: Notice of Proposed Rulemaking

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
III-A-01	05-13-02	Notice of Proposed Rulemaking; Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines At or Above 30 Liters/Cylinder	No Date

Category III-B: Proposed Support Documents

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
III-B-01	04-12-02	“Estimated Economic Impact of New Emission Standards for Heavy-Duty On-Highway Engines,” Assessments & Standards Division (ASD), Office of Transportation Air Quality (OTAQ), U.S. Environmental Protection Agency; Prepared by Acurex Environmental Corporation (EPA Contract No. 68-C5-0010; Acurex Environmental Final Report FR-97-13) (EPA 420-R-97-009)	03-97
III-B-02	04-24-02	C. Caffrey, Assessment & Standards Division (ASD), Office of Transportation Air Quality (OTAQ), U.S. EPA; Reference Lists of Wartsila’s DWI & Marine SCR Installations & Future Installations	04-24-02
III-B-03	05-13-02	“Draft Regulatory Support Document: Control of Emissions from Compression-Ignition Marine Diesel Engines At or Above 30 liters per cylinder;” U.S. EPA, Office of Air & Radiation, Office of Transportation Air Quality, Assessment & Standards Division	04-2002

Category IV-A: EPA Studies and Contractor Reports

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-A-01	11-12-02	Bunker News, Bunker Prices	10/23/02
IV-A-02	11-12-02	Memo from Chester J. France, Director, Assessment and Standards Division (ASD), Office of Transportation Air Quality (OTAQ), Office of Air and Radiation (OAR), US EPA to Margo Trsirigotis Oge, Director, Office of Air and Radiation (OAR), US EPA re Comments On Nonroad Diesel Emissions Standards Staff Technical Paper	6/4/02
IV-A-03	11-12-02	Staff Technical Paper "Nonroad Diesel Emission Standards"	10/01
IV-A-04	12-30-02	SCR Economics for Diesel Engines, July-August 2001, Diesel & Gas Turbine Worldwide	July-August 2001
IV-A-05	01-02-03	Final Regulatory Impact Analysis: Control of Emissions from Marine Diesel Engines	November 1999
IV-A-06	01-02-03	Draft Regulatory Impact Analysis: Control of Emissions from Compression-Ignition Marine Engines	November 1998
IV-A-07	01-02-03	SAE Paper #920467- Reduction of Smoke and NOx by Strong Turbulence Generated During the Combustion Process in D.I. Diesel Engines, Mitsuru Konno, Takemi Chikahisa, and Tadashi Murayama, Hokkaido University. *COPYRIGHTED *CANNOT BE REPRODUCED	—
IV-A-08	01-02-03	CIMAC Central Secretariat, Frankfurt am Main, Germany "The UEC-LS II/LSE Engine Development Program", H. Sakabe, M. Okabe	Congress 2001, Hamburg
IV-A-09	01-02-03	CIMAC Central Secretariat, Frankfurt am Main, Germany "Recent Development of Slow Speed Diesel Power Plants" Masaki Ohtsu	Congress 2001, Hamburg
IV-A-10	01-02-03	CIMAC Central Secretariat, Frankfurt am Main, Germany "Reduction of Emissions of a High Efficient Diesel-Engine with Solenoid Controlled Injection Pump by Mean of Water Injection" Ewald Kamleitner, Harmut Haury	Congress 2001, Hamburg
IV-A-11	01-02-03	Siemens Power Generation: Marine Applications, SINOx catalysts for marine propulsion engines, SINOx for Marine Propulsion Engines Reducing NOx Emissions on the High Seas and in Coastal Regions	11/14/02
IV-A-12	01-02-03	Email from Fred.Danska@wartsila.com to Cheryl Cafrey re DWI reference list	4/22/02
IV-A-13	01-02-03	Report "Non-Thermal Plasma for Marine Diesels", Lt D.E. Hughes (CF-Canadian Forces), Diesel Development Officer, Ships Support Agency, Marine Propulsion Systems IPT, Room 135, J Block, Foxhill, Bath BA1 5AB, UK, Dr R. McAdams, AEA Technology, Culham Abingdon, Oxon, OX14, 3ED, UK	Congress 2001, Hamburg

Category IV-A: EPA Studies and Contractor Reports

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-A-14	01-02-03	MAN B&W - Emission Control, Two-Stroke Low-Speed Diesel Engines	11/21/02
IV-A-15	01-02-03	Exhaust Gas Emission Measurements - A Contribution to a Realistic Approach	5/1995
IV-A-16	01-21-03	MAN B&W The Third Nordic-Japan Environmental Conference November 2002, Nagano City, Japan "Marine Transport Fuels and Emissions" Presented by Kjeld Aabo, Senior Manager, MAN B&W Diesel A/S, Copenhagen, Denmark	11/2002
IV-A-17	01-21-03	Report - "Houston-Galveston Area Vessel Emissions Inventory", Prepared for Port of Houston Authority, Texas Natural Resource Conservation Commission, Prepared by Starcrest Consulting Group, LLC, Houston Texas	11/2000
IV-A-18	01-21-03	Final Report "Marine Vessels Emissions Inventory, Update to 1996 Report: Marine Vessel Emissions Inventory and Control Strategies", Arcadis, Geraghty & Miller, Prepared for South Coast Air Quality Management District, 21865 E. Copley Drive, Diamond Bar, CA 91765	9/23/99
IV-A-19	01-28-03	Ozone AQCD, Tip No. 1068, 03_NewRefs2002.wpd, New Ozone Health and Environmental Effects References, Published Since Completion of the Previous O3, AQCD, National Center for Environmental Assessment, Office of Research and Development, US Environmental Protection Agency, Research Triangle Park, NC 27711	7/2002
IV-A-20	01-28-03	Letter with enclosures from Alan Stout, ASD, OTAQ, OAR, EPA to Raymond Mosely, Director, Executive Agency Division, Office of the Federal Register, 8900 North Capitol Street, NW, 7 th Floor, Suite 700, Washington, DC, 20001 Re: requesting approval of incorporation by reference of the material listed below into the Code of Federal Regulations, ISO 8178-1, International Standard	1/3/03

Category IV-B: Additional Factual EPA Memoranda

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-B-01	04-24-02	C. Caffrey, Assessment and Standards Division (ASD), Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA re: Reference Lists of Wartsila Corporation's Marine SCR and DWI Installations and Future Installations	04-24-02
IV-B-02	05-21-02	C. Moulis, Senior Environmental Engineer, Assessment & Standards Division, Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA re: Transport of Sox and NOx Emissions from Marine Engines	05-09-02
IV-B-03	12-30-02	Memo from Alan Stout, Mechanical Engineer, Assessment and Modeling Division (ASD), Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), US Environmental Protection Agency to Docket A-2001-11 re Estimated Cost Impacts of Changing Fuel Consumption Rates for Category 3 Marine Diesel Engines	11/15/02
IV-B-04	12-30-02	Memo from Alan Stout, Mechanical Engineer, Assessment and Modeling Division (ASD), Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), US Environmental Protection Agency to Docket A-2001-11 to Docket A-2001-11 re Preliminary Research Related to Processing and Marketing of Marine Bunker Fuels	11/18/02
IV-B-05	12-30-02	Memo from Fred Dimmick, Group Leader, Air Quality Trends and Analysis Group, Emissions Monitoring and Analysis Division to Docket A-200 1-11 re Summary of Currently Available Air Quality Data and Ambient Concentrations for Ozone and Particulate Matter.	1/7/03

Category IV-C: Additional EPA Correspondence to Person Outside EPA

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-C-01	10-15-02	Email from A. Stout, Office of Transportation Air Quality (OTAQ), Office of Air & Radiation (OAR), U.S. EPA: to Dr. T. Gunner, Intertanko; RE: Marine Questions	10-03-02
IV-C-02	01-31-03	Email from daily_news@marinelink.com to Alan Stout, forwarded to Kea@manbw.dk re Daily News, MaritimeToday.com, Latest Marine Industry News, Austal, USA	10/14/02

Category IV-D: Comments Received on the Proposal

Document Number	Date Rcvd in Agency	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-D-01	06-25-02	J. Cox, President, Chamber of Shipping of America (CSA) & C. J. Benner, Counsel, International Association of Independent Tanker Owners, Troutman Sanders L.L.P., Washington, D.C.	06-25-02
IV-D-02	07-12-02	S.I. Park, General Manager, Engine Initial Design & Development Department, Hyundai Heavy Industries Co., Ltd., Korea	07-13-02
IV-D-03	07-15-02	A. Mirzakhali, P.E., Program Administrator, Division of Air & Waste Management, Department of Natural Resources & Environmental Control, State of Delaware, Dover, DE	07-12-02
IV-D-04	07-15-02	Dr. H. Mayer, General Secretary, Euromot, European Association of Internal Combustion Engine Manufacturers, Frankfurt/Main, Germany	07-12-02
IV-D-05	07-15-02	T. Tanaka, Chairman, Large-Sized Engines Technical Committee, Japanese Marine Equipment Association (JSMEA), Japan	07-16-02
IV-D-06	07-15-02	R. H. Baldwin, Air Pollution Control Officer, Ventura County Air Pollution Control District, (APCD), Ventura, CA	07-15-02
IV-D-07	07-15-02	M. Chytilo, on behalf of Committees for Land, Air, Water, and Species (CLAWS), Santa Barbara, CA	07-15-02
IV-D-08	07-15-02	T. Knudsen & N. Kjemtrup, MAN B&W Diesel A/S, Copenhagen, Denmark	07-10-02
IV-D-09	07-16-02	J. A. Joy, III, P.E., Chief, Bureau of Air Quality, South Carolina Department of Health & Environmental Control (SCDHEC); Columbia, SC	07-15-02
IV-D-10	07-16-02	G. Shark, Manager, Corporate Regulatory Affairs, American Bureau of Shipping, Paramus, NJ	07-15-02
IV-D-11	07-16-02	J. L. Henry, President, Transportation Institute, Camp Springs, MD	07-16-02
IV-D-12	07-16-02	G. Cataneo Tosi, President, American Maritime Congress (AMC) on behalf of Marine Engineers' Beneficial Association (MEBA), Washington, D.C.	07-16-02
IV-D-13	07-16-02	M. Sacco, President, Seafarers International Union of North America (SIU), Camp Springs, MD	07-16-02
IV-D-14	07-16-02	N. L. Seidman, Chair, Mobile Sources & Fuels Committee, State & Territorial Air Pollution Program Administrators (STAPPA), & E. P. Skelton, Chair, Mobile Sources & Fuels Committee, Association of Local Air Pollution Control Officials (ALAPCO), Washington, D.C.	07-16-02
IV-D-15	07-16-02	D. Marshall, Senior Counsel, Clean Air Task Force on behalf of the American Lung Association of Metropolitan Chicago, American Lung Association of New York State, Environment Northeast, Legal Environmental Assistance Foundation, Ohio Environmental Council, Henniker, NH	07-16-02

Category IV-D: Comments Received on the Proposal

Document Number	Date Rcvd in Agency	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-D-16	07-16-02	B. Carhart, Executive Director, Ozone Transport Commission, Washington, D.C.	07-16-02
IV-D-17	07-16-02	V. Patton, et. al., Senior Attorney, Environmental Defense, Boulder, CO	07-16-02
IV-D-18	07-16-02	J. A. Saitas, Executive Director, Texas Natural Resource Conservation Commission, Austin, TX	07-16-02
IV-D-19	07-16-02	K. A. Colburn, Executive Director, Northeast States for Coordinated Air Use Management (NESCAUM), Boston, MA	07-16-02
IV-D-20	07-16-02	D. R. Schregardus, Deputy Assistant Secretary of the Navy (Environment), Installations & Environment, U.S. Department of the Navy, Washington, D.C.	07-16-02
IV-D-21	07-03-02	S. R. Meadows, General Manager, Marine Transportation, American Petroleum Institute (API), Washington, D.C.	07-03-02
IV-D-22	07-16-02	R. Magid, Editor/Publisher, <i>The View From the Hill</i> newspaper, Signal Hill, CA	07-07-02
IV-D-23	05-30-02	J. L. Denison, Long Beach, CA	05-30-02
IV-D-24	06-03-02	J. Bardi, Office of the President, ASTM International, West Conshohocken, PA	06-03-02
IV-D-25	07-15-02	R. Berkowitz, Pacific Coast Director, Transportation Institute, Seattle, WA	07-15-02
IV-D-26	07-12-02	T.E. Thompson, Executive Vice President, International Council of Cruise Lines (ICCL), Arlington, VA	07-12-02
IV-D-27	07-12-02	J. C. S. Horrocks, Secretary General, International Chamber of Shipping, London, UK	07-12-02
IV-D-28	07-12-02	R. Vestergren, Chairman of the International Council on Combustion Engines (CIMAC) Exhaust Emission Controls WG, & Vice President, Testing & Performance Expert Organization, Wartsila Corporation, Switzerland	07-12-02
IV-D-29	07-15-02	V. Schiavi, Policy Manager for Transport, Department of Policy & Business Practices, Maritime Transport Committee, International Chamber of Commerce, Paris, France	07-15-02
IV-D-30	07-15-02	T. A. French, Legal Counsel, Engine Manufacturers Association, Chicago, IL	07-15-02
IV-D-31	07-16-02	T. R. Campbell, Policy Director, Coalition for Clean Air	07-16-02
IV-D-32	07-16-02	Y. Sakinaga, President, The Japanese Shipowners' Association, Tokyo, Japan	07-16-02

Category IV-D: Comments Received on the Proposal

Document Number	Date Rcvd in Agency	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-D-33	07-16-02	R. W. Harkins, Vice President, Operations, Lake Carrier's Association, Cleveland, OH	07-16-02
IV-D-34	07-16-02	D. McLarren, Executive Director, Puget Sound Clean Air Agency, Seattle, Washington	07-16-02
IV-D-35	07-16-02	P.D. Venturini, Chief, Stationary Source Division, & R.H. Cross, Chief, Mobile Source Control Division, Air Resources Board, California Environmental Protection Agency, Sacramento, CA	07-16-02
IV-D-36	07-16-02	C.J. Benner, Troutman Sanders LLP, Washington, D.C. on behalf of the International Association of Independent Tanker Owners (INTERTANKO), Arlington, VA	07-16-02
IV-D-37	07-16-02	L.R. Allen, Air Pollution Control Officer, San Luis Obispo County Air Pollution Control District, San Luis Obispo, CA	07-16-02
IV-D-38	07-16-02	J.M. Weinstein, Co-Chair, Residents for Less Pollution, Long Beach, CA	07-16-02
IV-D-39	07-16-02	C. J. Benner, Counsel, Troutman Sanders LLP, on behalf of American Maritime Congress, American Ocean Operators, Inc., American Roll-On Roll-Off Carrier, American Petroleum Institute (API), APL Ltd., Central Gulf Line, Ltd., Chamber of Shipping of America, Crowley Maritime Corporation, CSX Lines, LLC., Farrell Lines, Inc., Independent Association of Drilling Contractors, International Association of Independent Tanker Owners (INTERTANKO), The International Organization of Masters, Mates, and Pilots, Lykes Lines Ltd., Marine Engineers' Beneficial Association (MEBA), Maritime Institute for Research & Industrial Development, Maritime Trades Department (AFL-CIO), Matson Navigation Company, P&O Nedlloyd Ltd., Salt Chuk Resources, Inc., Sealift, Inc., Seafarers International Union, Transportation Institute, Waterman Steamship Corporation, & World Shipping Council	07-16-02
IV-D-40	07-16-02	M. F. Fields, Natural Resource Specialist 2, Broward County Department of Planning & Environmental Protection, Fort Lauderdale, FL	07-16-02
IV-D-41	07-16-02	G. Gehner, PE, Environmental Engineer, Regulations & Product Compliance, Caterpillar, Inc., Peoria, IL	07-16-02
IV-D-42	07-16-02	E. B. Welch, Legislative Director, Passenger Vessel Association, Arlington, VA	07-16-02
IV-D-43	07-16-02	R. Kassel, Senior Attorney, Natural Resources Defense Council (NRDC)	07-16-02
IV-D-44	07-16-02	K. Patton, Technology & Environmental Assessment Division Manager, & D. W. Allard, Air Pollution Control Officer, Santa Barbara County Air Pollution Control District, Goleta, CA	07-16-02

Category IV-D: Comments Received on the Proposal

Document Number	Date Rcvd in Agency	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-D-45	05-27-02	G. Jonsson, Greek Ministry of Merchant Marines, MSTP HELLAS Ltd., Athens, Greece	05-27-02
IV-D-46	07-15-02	C. Hadler & H.J. Goetze, Germanischer Lloyd (GL), Head Office, Department NPC, Hamburg, Germany	07-15-02
IV-D-47	07-16-02	C. Brown, President, American Shipbuilding Association	07-16-02
IV-D-48	07-16-02	E. Garvey, Air Pollution Control Officer, Bay Area Air Quality Management District, San Francisco, CA	07-15-02
IV-D-49	07-16-02	D. Holmdahl, Chair, Santa Barbara County Air Pollution Control District (APCD) Board of Directors, Santa Barbara, CA	06-20-02
IV-D-50	07-16-02	B. R. Wallerstein, D. Env., Executive Officer, Southcoast Air Quality Management District, Diamond Bar, CA	07-12-02
IV-D-51	07-16-02	B. R. Wallerstein, California Air Pollution Control Officers Association, Cameron Park, CA	06-27-02
IV-D-52	07-16-02	L. Fiffick, CSP, Environmental Affairs Manager, Port of Houston Authority, Houston, TX	07-16-02
IV-D-53	07-16-02	D. Rogers, Deputy Director, Air Non-Point & Mobile Sources, Division of Air & Water Quality, Department of Environmental Conservation, State of Alaska, Juneau, Alaska	07-16-02
IV-D-54	07-16-02	R. Long, Executive Director, Bluewater Network, San Francisco, CA, et. al.	07-16-02
IV-D-55	07-16-02	Aron, private citizen	07-16-02
IV-D-56	07-16-02	K.Metcalf, Director, Maritime Affairs, Chamber of Shipping of America, Washington, D.C.	07-15-02
IV-D-57	07-15-02	R. Vestergren, Vice President, Testing & Performance Expert Org., Wärtsilä Corporation.	07-12-02

Category IV-E: EPA Memorandum of Meetings with Outside Groups

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-E-01	10-15-02	Minutes of Meeting, Subject: Environmental Protection Agency 40 CFR Part 94 NPRM from Kjeld Aabo/Svent Henningsen to "see enclosed list"	9/18/02

Category IV-F: Public Hearings

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-F-01	07-17-02	Transcript of Public Hearing of Thursday, June 13, 2002 held at Long Beach, CA; Reported by M. Donner, CSR No. 7504, Kusar & Harris, Long Beach, CA (File No. 996449)	06-13-02
IV-F-02	07-26-02	Testimony of D. Allard, Air Pollution Control Officer, Santa Barbara County, CA presented at the June 13, 2002, public hearing, Long Beach, CA	06-13-02
IV-F-03	07-26-02	EPA Public Hearing Agenda concerning the "Control of Emissions of Air Pollution From New Marine Compression-Ignition Engines at or above 30 Liters/Cylinder" Notice of Proposed Rulemaking, Long Beach, CA	06-13-02
IV-F-04	07-26-02	List of testifiers at the public hearing of June 13, 2002, Long Beach, CA	06-13-02
IV-F-05	07-26-02	Testimony of the Wartsila Corporation presented at the June 13, 2002, public hearing, Long Beach, CA	06-13-02
IV-F-06	07-26-02	Testimony of the Transportation Institute, presented by R. Berkowitz, Pacific Coast Director, at the June 13, 2002 public hearing, Long Beach, CA	06-13-02
IV-F-07	07-26-02	Statement of D. May, President, California Earth Corps, Lakewood, CA, presented at the June 13, 2002 public hearing, Long Beach, CA	06-13-02
IV-F-08	07-26-02	<i>Eco-Link</i> newspaper, premier issue, April 2002, Long Beach, CA	04-2002

Category IV-G: Correspondence Received after the Comment Period Closed

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-G-01	07-26-02	N. Covell, Air Pollution Control Officer, Sacramento Metropolitan Air Quality Management District, Sacramento, CA	07-19-02
IV-G-02	07-29-02	H. Kloster-Jensen, Chairman, Cotton Club & C. Sutcliffe, British Embassy & Secretary, Cotton Club	07-26-02
IV-G-03	09-25-02	H. M. Lee, private citizen	09-25-02
IV-G-04	09-30-02	B. J. Carlton, Acting Deputy Maritime Administrator, Maritime Administration, U.S. Department of Transportation	08-29-02
IV-G-05	09-30-02	Rep. L. Capps (D-CA), Committee on Energy and Commerce, U.S. House of Representatives, Washington, D.C.	09-12-02
IV-G-06	12-30-02	Letter from Lois Capps, Member of Congress to Margaret Borushko, US Environmental Protection Agency, National Vehicle and Fuels Emission Laboratory, 2000 Traverwood, Ann Arbor, MI 48105 re Docket A-2001-11; Marine Engine Rulemaking	9/12/02
IV-G-07	01-31-03	D. Faulkner, private citizen.	10/24/02

Category IV-H: Inter-agency Review Materials

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-H-01	01-02-03	Memo to Jean Marie Revelt - Assessment and Standards Division/Office of Transportation and Air Quality/Office of Air and Radiation, "Mardula, Francis "< Francis.Mardula@marad.dot.gov >, Bryan Wood-Thomas/DC/USEPA/US2EPA Re: FW: Category 3 Marine Diesel Engines; Draft Final EPA Tier 1 Interim Rule for Controlling Air Pollution	12/20/02
IV-H-02	01-08-03	Email to Amy L. Farrell@omb.eop.gov , from Karl Simon, EPA, Re: Quick Request (Tier 2)	1/7/03
IV-H-03	01-09-03	Email to Karl Simon/D /USEPA/US@EPA from Amy L Farrell@omb.eop.gov RE: Questions/Comments - Take 1	1/9/03
IV-H-04	01-09-03	Email to Amy L Farrell@omb.eop.gov from Camille.Mittelholtz@ost.dot.gov forwarded by Karl Simon Re: C3 Marine Engines Simon/DC/USEPA/US	1/9/03
IV-H-05	01-21-03	Memo from Alan Stout/EPA to Amy L. Farrell/EPA Re: Response to Comments, & attachment: Summary & Analysis of Comments: "Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder"	1/2003
IV-H-06	01-14-03	Email from Bromberg, Kevin L, keven.bromberg@sba.gov to Amy L Farrell@omb.eop.gov , cc Karl Simon, Jean Marie Revelt, Alan Stout, Keith Holman Re C3 Rule, one comment on this rule.	1/14/03
IV-H-07	01-14-03	IMO Comparison Table to OMB et al.	1/13/03
IV-H-08	01-28-03	Email from Amy L Farrell@omb.eop.gov to Karl Simon/DC/USEPA@EPA, Jean Marie Revelt, Alan Stout, cc: Arthur G Frass, etc. Re: Questions/Requests/Comments - Take 2	1/10/03
IV-H-09	01-28-03	Email from Alan Stout to Amy L Farrell@omb.eop.gov , cc: Arthur G. Frass, etc. Re New Language in the preamble and RSD since previous version	1/15/03
IV-H-10	01-28-03	Email from Camille.Mittelholtz@ost.dot.gov to Alan Stout/AA/USEPA/US@EPA & Karl Simon/US EPA re New Language, DOT comments on the preamble	1/17/03
IV-H-11	01-28-03	Email from Amy L Farrell@omb.eop.gov to wlundy@comdt.uscg.mil , etc re Comments, DOT	1/17/03
IV-H-12	01-28-03	Fax Transmission from Amy Farrell, Office of Management and Budget, to Jean-Marie Revelt, EPA Re: Comments on Draft C3 Marine Preamble	1/15/03
IV-H-13	01-28-03	Email from Alan Stout/Assessment and Standards Division/Office of Transportation and Air Quality/Office of Air and Radiation/US EPA to Amy Farrell, OMB Re: Analysis of Comments - compliance, S&A-compliance	1/17/03

Category IV-H: Inter-agency Review Materials

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-H-14	01-31-03	Fax Transmission from Amy Farrell, Office of Information and Regulatory Affairs, Office of Management and Budget, Natural Resources, Energy and Agriculture Branch, Washington, DC 20503 to Jean Marie Revelt, Assessment and Standards Division, Office of Transportation and Air Quality, Office of Air and Radiation, US EPA Re RSD comments	1/22/03
IV-H-15	01-31-03	Email from Alan Stout, Assessment and Standards Division, Office of Transportation and Air Quality, Office of Air and Radiation, US EPA to Amy L Farrell, Office of Management and Budget, EOP, cc Jean Marie Revelt, EPA & Karl Simon, EPA Re C3 Regulations with Attachment C3 regs Jan 23.03	1/23/03
IV-H-16	01-31-03	Email from Jean Marie Revelt, Assessment and Standards Division, Office of Transportation and Air Quality, Office of Air and Radiation, US EPA to Amy L Farrell, Office of Management and Budget, EOP, Gov cc Alan Stout Re New definition on formula for marine vessels in draft final rule	1/24/03
IV-H-17	01-31-03	Email from Amy L Farrell, OMB, EOP, gov to Karl Simon, DC, EPA, Bill Wehrum, DC, EPA, Jean Marie Revelt, AA, EPA, Alan Stout, AA, EPA Re Comments on C3 regulations	1/24/03
IV-H-18	01-31-03	Email from Alan Stout, ASD, OTAQ, OAR, EPA to Jean Marie Revelt, ASD, OTAQ, OAR, EPA Re: C3 Marine - Annual Certification and Surveys	1/27/03
IV-H-19	01-31-03	Email from Jean Marie Revelt, ASD, OTAQ, OAR, EPA to Amy L Farrell, omb, eop Re: C3 Marine - Proposed preamble language changes with Attachment- preamble-inter-agency issues	1/27/03
IV-H-20	01-31-03	Email from Alan Stout, ASD, OTAW, OAR to Amy L Farrell, omb, eop Re C3 Regs changes since January 23 with Attachment Regs Jan 28 03-red.pd	1/28/03
IV-H-21	01/31/03	Email from Amy L. Farrell, OMB, to Karl Simon, Jean-Marie Revelt and Alan Stout re: C3 Comments.	01/28/03
IV-H-22	01/31/03	Email from Frederick Kenney, OES, to Karl Simon, Jean-Marie Revelt and Alan Stout re: C-3 changes forwarded from Amy Farrell.	01/29/03
IV-H-23	01/31/03	Email from Jean-Marie Revelt to Amy Farrell, OMB, re: C3 Marine - Annual Statement of Compliance.	01/29/03
IV-H-24	01/31/03	Email from Jean-Marie Revelt to Alan Stout re: C3 Marine Rule - State Department Comments.	01/29/03
IV-H-25	01/31/03	Email from Jean-Marie Revelt to Robert Blumberg, OES, re: C3 Marine - Statement of Compliance.	01/30/03
IV-H-26	01/31/03	Email from Jean-Marie Revelt to Jeff Lantz, forwarded to Alan Stout re: C3 Marine - Annual Certification and Surveys.	01/30/03

Category IV-H: Inter-agency Review Materials

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
IV-H-27	01/31/03	Email from Jean-Marie Revelt to Robert Blumberg, forwarded to Alan Stout re: Questions/Requests/Comments.	01/30/03
IV-H-28	01/31/03	Email from Jeff Lantz, USCG, to Jean-Marie Revelt, forwarded to Alan Stout, re: C3 Marine - Annual Certification and Surveys.	01/30/03
IV-H-29	01/31/03	Email from Daniel Leubecker to Francis Mardula, DOT, Bryan Wood-Thomas, and Jean-Marie Revelt, forwarded to Alan Stout, re: Draft Final EPA Tier 1 Interim Rule for Controlling Air Pollution.	01/30/03
IV-H-30	01/31/03	Email from Robert Blumberg to Jean-Marie Revelt and Amy Farrell, OMB, re: C3 Marine - Statement of Compliance.	01/30/03
IV-H-31	01/31/03	Email from Jeff Lantz to Amy Farrell, OMB, and Wayne Lundy, USCG, forwarded to Alan Stout re: USCG comment.	01/30/03
IV-H-32	01/31/03	Email from Jean-Marie Revelt to Amy Farrell, OMB, transmitting C3 Marine - Redline preamble.	01/30/03
IV-H-33	01/31/03	Email from Jean-Marie Revelt to Amy Farell, OMB, transmitting C3 - Redline Regs.	01/30/03
IV-H-34	01/31/03	Email from Camille Mittelholtz, DOT, to Amy Farrell, OMB, and Jean-Marie Revelt re: DOT comments.	01/30/03
IV-H-35	01/31/03	Fax from Amy Farrell, OMB, to Alan Stout, comments related to information collection	01/31/03
IV-H-36	01/31/03	Email from Alan Stout to Amy Farrell, OMB, re: ICR Redline	01/31/03

Category V-A: Final Action Notice of Rulemaking

Document Number	Date Rcvd in Docket	Commenter, Addressee, Title or Description, etc.	Date of Document
V-A-01	01/31/03	Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines At or Above 30 Liters/Cylinder; Final Rule; signed January 31, 2003.	No Date
V-A-02	02/03/03	Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines At or Above 30 Liters/Cylinder; Final Rule; signed January 31, 2003; with Administrator's signature.	No Date
V-A-03	02/28/03	Control of Emissions From New Marine Compression-Ignition Engines at or Above 30 Liters Per Cylinder; Final Rule; Federal Register Notice.	02/28/03

Category V-B: Final Action Final Support Document

<u>Document Number</u>	<u>Date Rcvd in Docket</u>	<u>Commenter, Addressee, Title or Description, etc.</u>	<u>Date of Document</u>
V-B-01	01/31/03	Final regulatory Support Document: Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder	January 2003

Category V-C: Final Action Response to Comments Document

<u>Document Number</u>	<u>Date Rcvd in Docket</u>	<u>Commenter, Addressee, Title or Description, etc.</u>	<u>Date of Document</u>
V-C-01	01/31/03	Summary and Analysis of Comments: Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder (DRAFT)	01/03
V-C-02	01/31/03	Summary and Analysis of Comments: Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder (FINAL)	01/03