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Memorandum

To: Katy McGinty

From: Tom Grumbly

Re: Gore Involvement in Hazardous Waste/ Superfund

o Gore's involvement in hazardous waste began in Fall of 1978, with hearings in Energy and Commerce Committee on Valley of the Drums, in Toon, Tennessee. John Moss chaired the subcommittee.

o During the next Congress, beginning in January 1979, Gore took a major role. Mark Raabe, Energy and Commerce O and I staff director at the time, describes Gore as the "de facto chairman of the Committee on hazardous waste issues."

o Al was the number 2 member of the subcommittee, behind Bob Eckhardt from Texas. Early in the Congress, with the leadership of Gore and Gore staffer, Dr. Anne Cohen, who was loaned from Al's personal staff to the subcommittee, the subcommittee undertook the most extensive investigation of chemical industry waste disposal practices. Early in 1979, the subcommittee convened over 200 people from the chemical industry to get them to voluntarily disclose waste practices. Along with Bob Eckhardt, Gore was the leader.

o During that Congress, Gore was the prime moving force behind over 20 hearings that explored such sites as Love Canal in New York, and Chemical Control in New Jersey. The Subcommittee published its hearings, and its report in late 1979. The records show that Al was probably the most active member of Congress during this early period, before hazardous waste practices became the province of the substantive authorizing subcommittee, headed by Jim Florio

o Without Al's work on the Oversight and Investigation's Committee, there would have not been the Congressional record necessary to take action.

o Al took a major role in the floor debate in the lame duck session of 1989, when the Superfund bill was finally passed.

o For further information, call Mark Raabe at 202-638-4170.

SUBJECT: EPA CONTRACT MISMANAGEMENT

Dingell's Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce has been investigating contract management scandals in the EPA. Three hearings have been held:

1) March 4, 1992 hearing on EPA mismanagement of \$1/2 billion contract with Computer Sciences Corporations (CSC) showed how EPA is now captured and held hostage to CSC, a firm that has faced legal action from NASA due to widespread abuse and fraud. CSC computer contracts have permeated the entire agency, the contract is managed essentially by CSC employees in a "golden handshake" arrangement. So little oversight and control is maintained that CSC may even have access to competitors rates. The Inspector General has questioned \$13 million of the \$68 million spent in FY 91, and believes that more questionable charges exist. Despite the repeated red flags about contracting practices, EPA awarded CSC a 5-year \$347 million contract in September 1990.

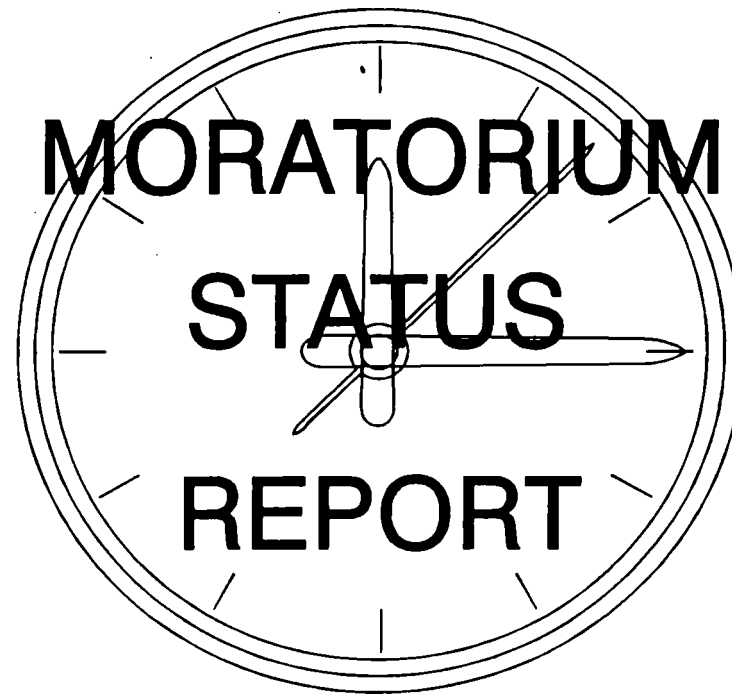
2) March 19, 1992 hearing focused on EPA superfund contractor CH2M Hill, which holds EPA contracts with a potential value of \$1.4 billion. While some of the attention focused on technical performance, most of the hearing looked at overhead accounting and cost controls. The EPA Office of Inspector General and the General Accounting Office both found significant departures from acceptable charges in the area of employee bonus and overtime, entertainment, travel, and promotional expenditures. Many of the charges will be disallowed and costs recovered, but serious questions remain as to fundamental reform of EPA oversight and CH2M Hill practices.

3) A July 8, 1992 hearing where Dingell took Reilly to task for CSC, CH2M Hill, and other contracting scandals. Reilly had received the findings of his third task force report, which basically said that EPA contracting system had collapsed. Reilly lays some of the blame on the 278 percent increase in EPA contracting swamping the 25 percent increase in EPA employees since 1981. The rampant use of "blank check" contracts to perform government functions is, of course, a Reagan-Bush initiative to supposedly improve the efficiency of government operations. Reilly outlined proposals for reform, such as hiring more contract personnel. GAO offered testimony entitled "Actions Needed to Correct Long-Standing Contract Management Problems" summarizing current difficulties.

Administration Response

The Administration response has been totally weak. On June 8, 1992 OMB announced that the Administration will "clamp down on costs improperly paid under certain Federal contracts." They established a "SWAT Team" to immediately review contracts and regulations involving 12 civilian departments and agencies. This belated effort is 3 1/2 years into the Bush Administration -- and the final report to the Director is scheduled to be completed on October 1, 1992. Curious timing, most would say.

The neglect of taxpayer money is outrageous, but the fact that EPA's mission has been compromised in the Superfund cleanup effort is even more distressing. Contracting in general has not been shown to be an efficient method of delivering government services. But rampant abuse makes matters worse. One is tempted to say that prior to the Administration establishing "SWAT Teams" they had "SO-WHAT Teams" managing the effort.



July 14, 1992

For further informaton, contact
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* New information is printed in *italics*.

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>TO FR</u>	<u>COMMENTS</u>
Oxygenated Gasoline Credit Programs under Section 211(m) of the Clean Air Act (p guidelines)	nonmajor		1/24/92	OMB cleared without an exemption letter, prior to the moratorium.
Protection of Stratospheric Ozone: Servicing of Motor Vehicle Air Conditioners (supp. p)	nonmajor	Stat. deadline: 11/15/91	4/16/92	
Fuel and Fuel Additives; Registration Requirements (p)	nonmajor	Court deadline: 4/1/92	4/2/92	
Rules of Practice Governing the Administrative Assessment of Civil Penalties under the CAA (f)	nonmajor		1/30/92	OMB cleared without an exemption letter.
Guidelines for Implementation of Section 507 of CAAA (f)	nonmajor		1/30/92	OMB cleared without an exemption letter.
Light-Duty Durability Procedures and Allowable Maintenance (p)	nonmajor	Progrowth	4/17/92	Published on 4/30/92.
Protection of Stratospheric Ozone: Labelling (p)	nonmajor	Stat. deadline: 5/15/92		Signed by the Administrator on 4/15/92. Published on 5/4/92.
Proposed Approval of Colorado's Petition to Relax the Colorado Reid Vapor Pressure Standard in 1992 and 1993 (p)	nonmajor		4/27/92	OMB cleared rule without exemption letter. Published on 5/12/92.
Notice of Temporary Stay and Temporary Direct Final of the Reid Vapor Pressure Standard for the Denver-Boulder Area (temporary stay and temporary direct final).	nonmajor		4/27/92	OMB cleared rule without exemption letter. Published on 5/12/92.

I. RULES PUBLISHED DURING THE MORATORIUM

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>TO FR</u>	<u>COMMENTS</u>
<u>OAR</u>				
Reformulated Gasoline & Anti-Dumping Regulations (p)	MAJOR	Stat. deadline: 11/15/91	4/3/92	
Onboard Control of Refueling Emissions (p)	MAJOR	Stat. deadline: 11/15/91	3/31/92	
General Preamble: Implementation of Title I of the CAAA (p)	MAJOR		4/2/92	OMB cleared without an exemption letter.
NESHAPs: Benzene Waste Operations; Proposed Amendments to Clarify Provisions of the Rule (p)	nonmajor	Court deadline: 2/14/92	2/26/92	
NESHAPs: Benzene Waste Operations; Stay of Effectiveness (f)	nonmajor	Court deadline: 2/14/92	2/26/92	
Rules of Practice Governing the Administrative Assessment of Civil Penalties Under the CAA (f)	nonmajor		1/30/92	OMB cleared without an exemption letter.
Ambient Air Quality Surveillance; Enhanced Ozone Monitoring Regulation (p)	nonmajor	Stat. deadline: 5/15/92	1/29/92	
Requirements for Preparation, Adoption and Submittal of Implementation Plans; Approval and Promulgation of Implementation Plans; Addition of a General Definition for VOCs (f)	nonmajor		1/23/92	OMB cleared without an exemption letter.
Proposed Guidance on Establishment of Control Periods under Section 211(m) of the CAA (p guidelines)	nonmajor		1/24/92	OMB cleared without an exemption letter, prior to the moratorium.

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>TO FR</u>	<u>COMMENTS</u>
Heavy Duty NOx Standards & Diesel Fuel Quality (f)	nonmajor	Exemption based on statutory deadline of 11/15/91 and deregulatory in nature.	4/24/92	Published on 5/7/92.
Reconsideration of Federal Revisions to the Stationary Source Control Measures in the Chicago, Illinois, Ozone Implementation Plan as they Pertain to the GM Electro-Motive Division (p)	nonmajor	Court deadline: 6/90	5/11/92	OMB completed review of the exemption on 5/1/92.
Nonconformance Penalties for Heavy Duty Engines, Vehicles, and Light Duty Trucks (p)	nonmajor	Progrowth	5/20/92	Published on 5/29/92.
Sacramento Federal Implementation Plan (ANPRM)	nonmajor	Court deadline: 5/15/92 or 6/26/92	5/20/92	The Agency sent an exemption letter to OMB on 5/5/92.
NESHAP: Radon Emissions from Phosphogypsum Stacks (f)	nonmajor	Deregulatory	5/26/92	Published on 6/3/92.
Cold Temperature CO Standards for Light Duty Vehicles and Trucks (f)	nonmajor	Stat. deadline: 11/15/92	6/2/92	Cleared OMB on 4/28/92.
Applicability of New Source Review and New Source Performance Standards at Electric Utility Sources (f)	nonmajor	Progrowth	7/8/92	OMB cleared without an exemption letter.
Acid Rain Phase Reserve/Phase II Allowance Allocation Subpart and Notice of Availability of Data Base (p)	nonmajor	Stat. deadline: 12/31/92	6/17/92	<i>Published on 7/7/92.</i>
Motor Vehicle & Engine Compliance Program: Fee Program (f)	nonmajor	Does not impede growth and part of President's budget	6/25/92	<i>Published on 7/7/92.</i>

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>TO FR</u>	<u>COMMENTS</u>
Illinois SIP: Partial Stay and Reconsideration of Certain RACT	nonmajor		6/23/93	OMB completed review on 5/21/92 without an exemption letter.
<i>Operating Permits Rule (f)</i>	MAJOR	Stat. deadline: 11/15/91	7/8/92	
<i>Initial List of Source Categories Under Section 112 of the CAA (f)</i>	nonmajor	Stat. deadline: 11/15/92	7/7/92	Signed by AA/OAR.
<i>Inspection/Maintenance Program Requirements (p)</i>	MAJOR	Stat. deadline: 11/15/91	7/9/92	
<i>Servicing of Motor Vehicle Air Conditioners (f)</i>	nonmajor	Stat. deadline: 11/15/91	7/10/92	Cleared OMB on 5/26/92.
<u>OPPTS</u>				
PCBs; Revision of Test Methods Incorporated by Reference (f)	nonmajor	Progrowth	4/10/92	
Modification of SNUR for Alkylated Diphenyl Oxide (p)	nonmajor	Deregulatory		Published on 5/13/92.
Modification of SNUR for 2-Chloro-N-Methyl-N-Substituted Acetamide and Mixed Alkylphenol Formaldehyde Polymer Metal Salt (f)	nonmajor	Deregulatory		Published on 5/13/92.
Exemption from Asbestos Ban for Omega Inc. (p)	nonmajor	Progrowth	5/20/92	Rule was reviewed earlier, OMB concurred with exemption on 5/5/92. Published on 6/2/92.
Ozone Depleting Chemicals (Hydrochlorofluorocarbons); Toxic Chemical Release Reporting; Community Right-to-Know (p)	nonmajor	Stat. deadline: 5/31/92	6/19/92	Exemption letter sent with rule. Published on 6/24/92.

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>TO FR</u>	<u>COMMENTS</u>
<i>Terbuthylazine; Revocation of Tolerances (f)</i>	<i>nonmajor</i>	<i>Pro-growth and regulatory relief</i>		<i>OPPTS sent this rule to OMB and not RDB. Published on 7/8/92.</i>
<i>SNUR for New Chemical Substances (50577F) P-86-501/503 (f)</i>	<i>nonmajor</i>	<i>Progrowth</i>	<i>7/7/92</i>	<i>Exemption letter sent on 6/17/92.</i>
<u>OSWER</u>				
Hazardous Waste Management System; Definition of Hazardous Waste; "Mixture" and "Derived From" Rules (interim f)		Court deadline: 2/18/92	2/20/92	<i>Published on 3/3/92.</i>
Hazardous Waste Management System; Definition of Hazardous Waste; "Mixture" and "Derived From" Rules (p)		Court deadline: 2/18/92	2/20/92	<i>Published on 3/3/92.</i>
National Priorities List for Uncontrolled Hazardous Waste Sites; Update 12 (p)	nonmajor		2/4/92	OMB cleared without an exemption letter. <i>Published on 2/7/92.</i>
Timing of Surface Impoundment Retrofitting Under the Land Disposal Restrictions Rule (p)	nonmajor		1/30/92	OMB cleared without an exemption letter. <i>Published on 2/4/92.</i>
Liners and Leak Detection Systems for Hazardous Waste Land Disposal Units (f)			1/17/92	OMB cleared without an exemption letter. <i>Published on 1/29/92.</i>
Reportable Quantity Adjustment: Lead Metal, Lead Compounds, Lead Containing Hazardous Waste, and MIC (p)	nonmajor	Consent agreement: 4/30/92	4/10/92	Published on 5/8/92.
Hazardous Waste Management System; General; Identification and Listing of Hazardous Waste; Used Oil (p)	nonmajor	Court deadline: 5/1/92 and progrowth	5/11/92	Published on 5/22/92.

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>TO FR</u>	<u>COMMENTS</u>
Amendment to NCP; Appendix; Procedures for CLP Investigation (p)	nonmajor	Internal Agency procedures	5/15/92	Published on 5/20/92.
HWMS; Identification and Listing of Hazardous Waste; Exclusions (f)	nonmajor	Deregulatory	6/16/92	Published on 6/22/92.
<i>Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Concentration-Based Exemption Criteria (p)</i>	<i>nonmajor</i>	<i>Deregulatory</i>	5/20/92	<i>Cleared OMB 5/16/92.</i>
<i>Land Disposal Restrictions "No Migration Variances" (p)</i>	<i>nonmajor</i>	<i>Deregulatory</i>	7/2/92	
<u>OW</u>				
NPDES Stormwater Deadlines Registration (f)	nonmajor	Stat. deadline: 2/1/92	3/27/92	
Pesticide Manufacturing Effluent Guideline (p)	MAJOR	Settlement agreement: 3/31/92	4/2/92	
Treatment of Indian Tribes as States for Purposes of the NPDES and State Sludge Management Programs (p)	nonmajor	Stat. deadline: 8/19/88	3/2/92	
Effluent Guidelines Plan Under CWA 304(m)	nonmajor	Settlement agreement requiring signature by 4/30/92.	5/1/92	Published on 5/7/92.
NPDWR; Analytical Techniques; Coliform Bacteria (f)	nonmajor	Progrowth	6/3/92	

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>TO FR</u>	<u>COMMENTS</u>
Notice of Postponement of Certain Provisions of the Final NPDWR: Aldicarb, Aldicarb Sulfoxide, and Aldicarb Sulfone (notice)	nonmajor	Deregulatory	5/15/92	
Revisions to Application Requirements for Sludge Permits (p)	nonmajor	Deregulatory and consent decree of 7/31/92	5/20/92	
NPDWR; Inorganic and Organic Compounds; Phase V (f)	nonmajor	Court deadline: 5/11/92	6/2/92	OMB returned rule on 5/8/92 without clearance. Signed by the Administrator on 5/18/92.
<u>OARM</u>				
National Environmental Education Act (NEEA) Grants Regulations (interim f)	nonmajor	Stat. deadline: 11/18/91	3/3/92	
<u>OE</u>				
New Environmental Appeals Board in Agency Adjudications (f)	nonmajor	Internal agency procedures.	1/28/92	
Lender Liability under CERCLA (f)	nonmajor		4/1/92	The Administration exempted this rule from the moratorium. Published on 4/29/92.

II. RULES CLEARED DURING THE MORATORIUM, BUT NOT YET PUBLISHED

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>CLEAR OMB</u>	<u>COMMENTS</u>
<u>OAR</u>				
Standards of Performance for Stationary Sources; Appendix A, Amendments to Method 24 (f)	nonmajor		5/21/92	OMB completed review without an exemption letter. Sent to AX on 6/12/92.
<i>Final Rulemaking to Implement Section 604 of the CAAA--Phaseout of Ozone-Depleting Chemicals (f)</i>	MAJOR	Stat. deadline: 5/15/92	7/2/92	Sent to AX on 7/10/92.
<i>Criteria for Exercising Discretionary Sanctions Under Title I of the CAA (p) ***</i>	nonmajor	Internal organization and administrative procedures	7/2/92	Exemption letter sent on 6/8/92.
<u>OPPTS</u>				
NONE				
<u>OSWER</u>				
<i>Land Disposal Restrictions for Newly Listed Wastes and Hazardous Debris - Phase I (f) ***</i>	nonmajor	Court deadline for part of rule.	6/30/92	Signed by the Administrator on 6/30/92.
<i>Response Claims Procedures for the Hazardous Substance Superfund (f) ***</i>	nonmajor	Administrative procedures and pro-growth	6/4/92	
<i>Technical Assistance Grants to Groups at NPL Sites (f) ***</i>	nonmajor	Non-regulatory and internal procedures	6/18/92	

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>CLEAR OMB</u>	<u>COMMENTS</u>
<u>OW</u>				
Surface Water Toxics Control Program-- CWA 303(d) (f)	nonmajor	Court action	6/15/92	Exemption letter sent to 6/5/92.
Effluent Guidelines for Organic Chemicals, Plastics, and Synthetic Fibers (f)	nonmajor	Deregulatory and two settlement agreements	6/22/92	The Agency sent an exemption letter to OMB on 3/13/92.
NPDES Fee Rule (p) ***	nonmajor	Stat. deadline	6/11/92	Exemption letter sent on 6/15/92.

III. RULES AT OMB (EXEMPT)

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>Sent TO OMB</u>	<u>COMMENTS</u>
<u>OAR</u>				
Hazardous Organics NESHAP (p) ***	MAJOR	Stat. deadline: 11/15/92	12/24/91	The Agency sent an exemption letter to OMB on 3/19/92.
Light Duty Short Test and Revised Emission Test (p) ***	nonmajor	Stat. deadline: 11/15/91	1/3/92	The Agency sent an exemption letter to OMB on 3/19/92.
General Provisions for NESHAP for Source Categories (p) ***	nonmajor	Stat. deadline: 11/15/92	1/7/92	The Agency sent an exemption letter to OMB on 3/19/92. OMB suspended this rule.
Source Category Schedule for Standards (p) ***	nonmajor	Stat. deadline: 11/15/92	3/9/92	The Agency sent an exemption letter to OMB on 3/9/92.
Acid Rain NOx Emission Reduction (p) ***	MAJOR	Stat. deadline: 5/15/92	4/15/92	Exemption letter sent on 4/15/92.
Final Guidance on the Establishment of Control Periods under Section 211(m) of the CAA (F guidance) ***	nonmajor	Pro-growth	4/30/92	The Agency sent exemption letter on 5/18/92.
Standards for Emissions from Natural Gas-Fueled, and Liquefied Petroleum Gas-Fueled Motor Vehicles and Motor Vehicle Engines, and Certification Procedures for Aftermarket Conversion Hardware (p) ***	nonmajor	Pro-growth	4/30/92	Exemption letter sent on 5/27/92.
Revision Not to Revise Ozone NAAQS (p) ***	nonmajor	Court deadline: 8/1/92	6/2/92	Exemption letter sent with SF-83.
Protection of Stratospheric Ozone: Recycling (p) ***	nonmajor	Stat. deadline: 1/1/92	6/3/92	Exemption letter sent with SF-83.

*** = Exempted rules where E.O. 12291 period has expired.

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>SENT TO OMB</u>	<u>COMMENTS</u>
Compliance Extensions for Early Reductions (f) ***	nonmajor	Progrowth	6/10/92	Exemption letter sent with SF-83.
<i>Clean Air Act Awards Regulation (p) ***</i>	nonmajor	Administrative procedures	2/28/92	Exemption letter sent 6/25/92.
<i>CAA Regulations for Citizen Suits (p) ***</i>	nonmajor	Administrative procedures	4/23/92	Exemption letter sent 6/25/92.
<i>Outer Continental Shelf Air Regulations (f)</i>	nonmajor	Stat. deadline	7/2/92	Exemption letter to follow.
<i>Oxygenated Gasoline Labeling Regulations under Section 211(m) of the CAA (f)</i>	nonmajor	Progrowth	7/6/92	Exemption letter to follow.
<i>Notice of Guidelines for Oxygenated Gasoline Credit Programs (final guidance)</i>	nonmajor		7/8/92	Exemption letter forthcoming.
<i>Notice of Proposed Finding: Administrator's Finding that No Control or Prohibition on Maximum Oxygen Content of a Winter Oxygenated Gasoline Program is Necessary (p)</i>	nonmajor		7/8/92	Exemption letter forthcoming.
<i>Credit Program for California Pilot Program (f)</i>	nonmajor	Stat. deadline	7/7/92	Exemption letter sent with SF-83.
<u>OPPTS</u>				
PCBs Weight/Dry Weight Classification (f)***	nonmajor	Pro-growth	6/5/92	Exemption letter sent 6/25/92.
Ethane, 2-chloro-1,1,1,2-tetrafluoro-Significant New Use Rule (50591C) (f) ***	nonmajor	Pro-growth & regulatory relief	6/23/92	Exemption letter sent with rule.

*** = Exempted rules where E.O. 12291 period has expired.

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>SENT TO OMB</u>	<u>COMMENTS</u>
<i>SNUR for New Chemical Substances (50603) (f) ***</i>	<i>nonmajor</i>	<i>Progrowth</i>	<i>3/16/92</i>	<i>Exemption letter sent 6/29/92.</i>
<i>Significant New Use Rules for New Chemical Substances: Batch 50601 (f)</i>	<i>nonmajor</i>	<i>Progrowth</i>	<i>7/6/92</i>	<i>Exemption letter sent with SF-83.</i>
<i>SNUR for New Chemical Substances: Dialkyldialkoxysilane (50600) (p) ***</i>	<i>nonmajor</i>	<i>Progrowth</i>	<i>3/16/92</i>	<i>Exemption letter sent on 7/8/92.</i>
<i>PMN Amendments (p)</i>	<i>nonmajor</i>	<i>Regulatory Relief</i>	<i>7/9/92</i>	<i>Exemption letter sent on 7/10/92.</i>
<u>OSWER</u>				
<i>MSWLF: State/Tribal Permit Program Determination of Adequacy (p) ***</i>	<i>nonmajor</i>	<i>Progrowth and deregulatory</i>	<i>2/14/92</i>	<i>The Agency sent an exemption letter to OMB on 3/19/92. Although this rule does not have a statutory deadline, the Agency must promulgate this rule ASAP in order for the states to meet their statutory deadline.</i>
<i>Coke By-Products Listing and Determination and CERCLA Hazardous Substance Designation (f) ***</i>	<i>nonmajor</i>	<i>Court and stat. deadline</i>	<i>6/29/92</i>	<i>Exemption letter sent on 7/6/92.</i>
<i>Revisions to the RCRA Subtitle C Financial Responsibility Requirement -- Third Party Liability, Non-Parent Guarantee for Closure and Post-Closure, and Post-Closure Deed Notification (f) ***</i>	<i>nonmajor</i>	<i>Deregulatory</i>	<i>5/5/92</i>	<i>Exemption letter sent to OMB on 6/9/92.</i>
<i>NPL for Uncontrolled Hazardous Waste Sites: Update 13 (p) ***</i>	<i>nonmajor</i>	<i>Stat. deadline</i>	<i>5/5/92</i>	

*** = Exempted rules where E.O. 12291 period has expired.

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>SENT TO OMB</u>	<u>COMMENTS</u>
List of Substances and Threshold Quantities for Accidental Release Prevention and Requirements for Petitions (p)	MAJOR	Stat. deadline: 11/15/92	5/15/92	
Accidental Prevention Regulation and Risk Management for Accidental Release Provisions (p)	MAJOR	Inextricably linked to List of Substances rule above.	5/15/92	Agency sent exemption letter explaining interdependence of the List and Risk Management rules.
National Priorities List for Uncontrolled Hazardous Waste Sites Update 11 (f) ***	nonmajor	Stat. deadline	6/10/92	Exemption letter sent with SF-83.
Suspension of the Toxicity Characteristics Rule for Non-UST Petroleum Product-Contaminated Media and Debris (p) ***	nonmajor	Progrowth	6/10/92	Exemption sent on 6/16/92..
Procedures for Planning and Implementing Off-site Response Actions (f) ***	nonmajor		6/15/92	Exemption letter to follow.
CERCLA Administrative Hearing Procedures for Claims Asserted Against Superfund (p) ***	nonmajor	Administrative and no economic burden	5/1/92	Exemption letter sent on 6/16/92.
Land Disposal Restrictions for Newly Listed Wastes and Contaminated Soil (Phase II) (p) ***	nonmajor	Pro-growth, deregulatory and court-ordered	6/23/92	Exemption letter to follow.
Recovery of Costs for CERCLA Response Actions (p) ***	nonmajor	Administrative procedures	11/29/91	Exemption letter sent on 7/6/92.

*** = Exempted rules where E.O. 12291 period has expired.

<u>TITLE</u>	<u>CLASS.</u>	<u>EXEMPTION CATEGORY</u>	<u>SENT TO OMB</u>	<u>COMMENTS</u>
<u>OW</u>				
National Toxics Rule (f) ***	MAJOR	Stat. deadline: 90 days after proposal (11/19/91)	4/22/92	Rule sent, exemption letter sent on 4/22/92.
NPDES General Permit for Stormwater Discharges Associated with Industrial Activity (f) ***	nonmajor	Stat. deadline: 2/1/92	6/11/92	Exemption letter sent on 6/15/92.
<u>ORD</u>				
Guidelines Establishing Test Procedures for the Analysis of Pollutants: Microwave Digestion Alternative Test Procedure (p) ***	nonmajor	Regulatory relief	6/16/92	Exemption letter sent on 6/18/92.

*** = Exempted rules where E.O. 12291 period has expired.

IV. RULES AT OMB (NO EXEMPTION CLAIMED)

<u>TITLE</u>	<u>CLASS.</u>	<u>SENT TO OMB</u>	<u>COMMENTS</u>
<u>OAR</u>			
Waiver of Preemption to CA for Nonroad Engine and Vehicle Standards (f)	nonmajor	11/29/91	OMB suspended rule on 5/7/92. OMB resumed review on 5/28/92.
Groundwater Protection Standards for Inactive Uranium Mill Tailings (f)	MAJOR	3/9/89	
Statement of Policy Regarding Petitions under Section 112(b) of the CAA (p)	nonmajor	8/26/91	
NSPS: SO2MI Reactor Processes (p)	nonmajor	4/6/92	
<u>OPPTS</u>			
Pesticide Status of Products Affecting Soil Bacteria Responsible for Loss of Soil Nitrogen (f)	nonmajor	2/1/91	This rule has been suspended.
Worker Protection Standards (proposal and final)	MAJOR	6/12/92	OPPTS requested OMB to resume review on 5/15/92.
Microbial Pesticides; Experimental Use Permits and Notification [FIFRA/Biotech] (p)	nonmajor	7/2/91	
Pesticide Management and Disposal (p)	nonmajor	12/18/91	OMB suspended rule 6/18/92.
Pesticide Export Policy (f)	nonmajor	12/30/91	OMB suspended rule 6/18/92.
Water Purifiers; Labelling Claims (p)	nonmajor	1/29/92	
<u>OSWER</u>			
Amendments to Groundwater Monitoring Requirements at Hazardous Waste Facilities (f)	nonmajor	5/1/91	OMB returned rule on 7/2/92.

<u>TITLE</u>	<u>CLASS.</u>	<u>SENT TO OMB</u>	<u>COMMENTS</u>
NCP Subpart K: A Roadmap to the NCP for Federal Facilities (p)	nonmajor	5/23/91	
HWMS: Groundwater Monitoring Constituents (Phase II) & Methods (p)	nonmajor	11/12/91	
Test Methods for Evaluating Solid Waste, 3rd Edition of SW-846 for Update I (f)	nonmajor	12/18/91	
Test Methods for Evaluating Solid Waste, 3rd Edition of SW-846 for Update II (p)	nonmajor	12/18/91	
Final Guidelines to Implement CERCLA Section 119; Indemnification of Response Action Contractors (final guidelines)	nonmajor	2/21/92	
Ground-Water Monitoring at Hazardous Waste Facilities: Final Amendments to Rule (f)	nonmajor	4/24/92	
Reimbursement to Local Government for Emergency Response to Hazardous Substance Release (f)	nonmajor	5/11/92	
<i>Underground Storage Tanks Containing Petroleum; Financial Responsibility Requirement (f)</i>	<i>nonmajor</i>	7/9/92	
<u>OW</u>			
NPDES Regulatory Revisions (p)	nonmajor	10/29/91	

V. RULES CLEARED BEFORE THE MORATORIUM, BUT NOT PUBLISHED

<u>TITLE</u>	<u>CLASS.</u>	<u>CLEARED OMB</u>	<u>COMMENTS</u>
<u>OAR</u>			
NSPS: Calciners and Dryers (f)	nonmajor	10/4/91	<i>Exemption letter in OPPE signature chain.</i>
Addition of Method 203 for the Determination of Opacity of Emissions from Stationary Sources by Continuous Opacity Monitoring Systems (p)	nonmajor	12/5/91	<i>Exemption letter in OPPE signature chain.</i>
Ambient Air Quality Surveillance Regulation (p)	nonmajor	1/14/92	<i>Exemption letter in OPPE signature chain.</i>
<u>OPPTS</u>			
SNUR for New Chemical Substances (50598) (f)	nonmajor	10/18/91	This rule is on hold for submission to F.R. pending completion of the docket.
Pesticide Reporting Requirements for Risk/Benefit Information (p)	nonmajor	1/28/92	<i>Exemption letter in OPPE signature chain. Exemption based on emergency safety criteria.</i>
SNUR for New Chemical Substances (50601) (f)	nonmajor	1/28/92	<i>A new version of this rule was sent to OMB on 7/6/92.</i>
Terbutylazine; Revocation of Tolerances (f)	nonmajor		<i>Exemption letter sent on 6/24/92.</i>
<u>OSWER</u>			
State Hazardous Waste Enforcement and Compliance Monitoring Requirements (p)	nonmajor	10/4/91	Program office has not provided an exemption justification.
Civil Penalty Provisions for the Oil Pollution Prevention Regulations (Interim final)	nonmajor	1/27/92	Program office sent justification to RDB on 6/27/92.

<u>TITLE</u>	<u>CLASS.</u>	<u>CLEARED OMB</u>	<u>COMMENTS</u>
<u>OW</u>			
Surface Water Toxics Control Program--CWA 304(l) (p)	nonmajor	11/21/91	Exemption letter sent 6/5/92 based on court deadline.
<u>OA</u>			
Disadvantaged Business Enterprise Program Plan (p)	nonmajor	8/2/91	Program office has not provided an exemption justification.
<u>OE</u>			
Regulations Governing Citizen Suits under Section 310 of CERCLA (f)	nonmajor	5/20/91	Sent exemption letter on 6/17/92 based on administrative procedures.

United States Senate

WASHINGTON, DC 20510

August 7, 1992

Dear Colleague:

On July 21st you received a letter soliciting your support for S. 2900, a bill to establish a moratorium on implementation of further regulations under the Safe Drinking Water Act until EPA performs a comprehensive review of the program and Congress reauthorizes the Act.

Since then, the National Governors' Association has met and adopted a strong endorsement of the basic tenets of this bill. We are pleased to provide you with a copy of the resolution that was passed by the Governors last weekend. We specifically direct your attention to part 49.2.2, which focuses on statutory changes.

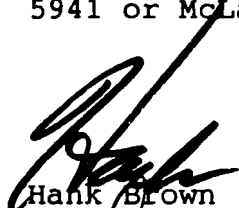
It is clear that a strong consensus is building. This program is extremely costly and the benefits are being questioned. It is appropriate to step back and reexamine whether changes are needed.

S. 2900 does not throw out present regulations that are being implemented to address significant risks. It simply delays a next round of costly regulations -- the benefits of which are being questioned -- until we have a chance to review the program. In addition, in the event the EPA Administrator determines that a significant health risk exists from an unregulated contaminant, he can immediately move to promulgate and implement additional regulations, despite the moratorium.

We are also enclosing a copy of a briefing paper prepared jointly by the Association of Metropolitan Water Agencies, the American Water Works Association, the National Association of Water Companies, the National Water Resources Association, and the National Rural Water Association, which is in response to a letter sent on July 15, 1992, to all Senators from a coalition of several environmental organizations.

Page Two
August 7, 1992

We hope you will join us in this effort to inject rationality into the drinking water program by cosponsoring this bill. If you have any questions, don't hesitate to contact Linda Findlay with Senator Domenici at 4-7856, Bennett Raley with Senator Brown at 4-5941 or McLane Layton with Senator Nickles at 4-5754.

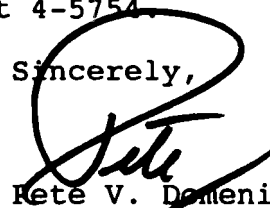


Hank Brown



Don Nickles

Sincerely,



Pete V. Domenici



Dennis DeConcini

Safe Drinking Water Act Implementation Problems

The Facts

Many problems with implementation of the 1986 amendments to the Safe Drinking Water Act have recently been brought to the attention of Congress by members of both the Senate and House, EPA, the States, the water supply community and towns and cities across the country. The message clearly delivered from all fronts is that there are pressing problems with the basic framework of the Safe Drinking Water Act and that a refocus and prioritization of resources on those contaminants that pose the greatest risk is essential.

Background

In 1986 Congress amended the Safe Drinking Water Act by requiring EPA to set standards for a specific list of 83 contaminants* in addition to requiring that standards be set for 25 additional contaminants every three years. To date, EPA has set standards for 84 contaminants, with 2 new and 4 revised standards anticipated in 1993 and 111 total expected by 1995. Each standard is accompanied by sampling, monitoring, reporting and treatment requirements. Every three years EPA is required to review each standard and amend it under certain conditions.

In accordance with the Act and congressional intent, EPA determines affordability based on what is affordable to systems with relatively clean source water serving more than 1,000,000 people. This does not necessarily lead to treatment processes that are affordable to systems serving fewer people which represent the overwhelming majority of the over 200,000 public water systems in the country. Except for the smallest of systems, the cost of compliance with the standards and accompanying requirements is paid for by cities, towns and investor-owned water supply systems of all sizes without any significant Federal or State funds.

The requirements of the Safe Drinking Water Act are a good example of the continuing problem of unfunded Federal mandates. (Note: These costs are borne directly by the public. Over 80 percent of water systems in the country are municipal or publicly-owned).

The Problem

Financing the Act's requirements is a serious problem facing all water systems across the country. However, it is not the only problem with the statute and its regulations, and providing more funds for State primacy programs, while important, is not a panacea for what ails the Act. When Congress mandated that EPA set standards for 83 specific contaminants, there was little incentive for EPA to assemble adequate scientific data to demonstrate that the contaminant appeared in drinking water at levels of health concern or to demonstrate the feasibility of the best available technologies for treatment in spite of statutory requirements.

Members of the Senate recently received from a coalition of environmental organizations a list of contaminants and their potential health risk to humans. What the list did not contain was information on whether the contaminants occurred in drinking water; whether they occurred at levels of health concern; whether the existence of the contaminant is national, regional or local; or whether there were any health benefits received by the public commensurate with the millions of dollars spent, or to be spent, on compliance.

For example:

- Endrin is a pesticide subject to EPA regulation and one of the 83 drinking water contaminants to be regulated by congressional decree. Most registered uses of endrin were cancelled in 1976, and the EPA has negotiated the cancellation of all remaining uses. It is no longer produced in the United State. The data provided by the EPA shows that since 1977, endrin has never been found in drinking water above 0.2 parts per billion. The regulation sets a standard (Maximum Contaminant Level - MCL) for endrin of 2.0 parts per billion, ten times the highest level ever found. Public funds will be expended, however, long into the future for monitoring, testing, evaluating and reporting on this chemical even though it has never been found at the level established for the standard.
- Cyanide, another contaminant on the list of 83, has been found at average concentrations between 0.8 parts per billion and 8.0 parts per billion. A health based goal and a standard of 200 parts per billion has been finalized; 25 times the highest average found in any water system.
- Less than 5 percent of the drinking water supplies have been identified as containing nickel but all systems are subject to the requirements and resulting costs of the rule. Only two systems have been found with levels over 50 parts per billion. An MCL and goal (Maximum Contaminant Level Goal - MCLG) of twice that figure, 100 parts per billion was finalized.
- Data on di(ethylhexyl)adipate, another contaminant on the list of 83, are almost nonexistent. The maximum level at which it has been found in river water is 30 parts per billion. It is listed as relatively nontoxic and a MCLG and MCL of 400 parts per billion is in place; 13 times the maximum found.
- The only data on dalapon, another contaminant on the list of 83, shows a maximum concentration of 1 part per billion. Two hundred times this amount is the final standard and goal.
- Oxamyl occurrence has only been documented in state and regional studies. These studies, however, were made in areas where oxamyl was suspected to be a potential problem. The maximum level found was 49 parts per billion compared to the 200 parts per billion standard and goal.

research on the by-products and risks of these other disinfection methods is even less well understood. Research on chlorination and other disinfection methods and their by-products is ongoing both at EPA and by the water supply community.

A study on chlorinated drinking water was recently released by the American Journal of Public Health. The authors of the study (which was a re-analysis of studies conducted in the 1970's prior to establishment of the existing standard for trihalomethanes - THMs - a known by-product of chlorination), and other experts, stressed that the new study should not lead to stopping chlorination, according to an article in the *New York Times*. The article quoted the authors stating that, "The potential health risks of microbial contamination of drinking water greatly exceed the risks". (Attached is the July 1, 1992 *New York Times* Article "Tiny Cancer Risk in Chlorinated Water" and EPA's Fact Sheet on chlorination).

The drinking water community has spent over \$11.6 million to-date and is dedicating additional research funds to the complex issue of disinfection and disinfection by-products. The water supply community also continues to urge the Federal government to provide additional support for health effects research in this area.

Lead in Drinking Water

Lead leached into drinking water from lead pipes, solder, fittings, and fixtures is not removed through corrosion control as indicated in a letter to members of the Senate on July 15, but corrosion control is instead put into place by water suppliers to reduce the leaching of lead which comes primarily from home plumbing. Neither is corrosion control "simple" as stated. The reaction of different water sources to the various chemicals that can be used for corrosion control, varies and can, if not properly done, actually increase lead levels, increase the risks of microbial disease, or increase THM levels.

Each system that is required to add treatment chemicals for corrosion control purposes, must evaluate the impact of the treatment on that particular system. Corrosion control simply does not come in a tidy "one size fits all" package.

Radon

We do not underestimate the health threat posed by exposure to radon, one of the 83 contaminants required to be regulated. However, EPA's Science Advisory Board has put the problem in perspective by writing, "The chief risk due to radon in water is its release into the air and subsequent inhalation, as opposed to ingestion of waterborne radon. Thus a 10^4 risk level (averaged over smokers and non-smokers) translates into about 0.03 pCi/L in air, or approximately 300 pCi/L in water. That air concentration is more than 100 times smaller than the Agency's voluntary guideline of 4 pCi/L for indoor air radon concentrations. It also (sic) well within the natural year-to-year variation in indoor radon concentrations in average houses." The SAB letter goes to state,

The standards set for these chemicals are equal to their maximum contaminant level goals. Both are set at levels based on conservative assumptions at which no known or anticipated adverse effects on health of persons occur and incorporate the required appropriate margin of safety. Even with these safety precautions, levels actually found in water do not approach these levels. In practice, these contaminants may never be detected in a water supply system, but the sampling, monitoring, reporting and state administration requirements go on indefinitely at significant cost to the consumer. For those contaminants that do occur, EPA estimates that the Phase V rule will impose costs of \$35 million per year on roughly 256 communities; 97 percent of which have fewer than 10,000 residents.

EPA Administrator Reilly noted during the press briefing on the Phase V rule, that the common thread for most of the contaminants under the rule was that they rarely occurred in drinking water and rarely at levels of public health concern. In fact for eight of the contaminants, the final rule noted that national occurrence data was not available because the contaminants appeared so infrequently in drinking water. A good example is the State of North Dakota. North Dakota has determined that 36 of the 42 pesticides subject to monitoring under Safe Drinking Water Act regulations are not used anywhere in the State, or are used on less than six tenths of one percent of the total acreage within the State. North Dakota proposed a statewide waiver from the monitoring requirement for 10 of these 36 pesticides. This would reduce the cost to water systems from about \$6,600 to \$1,200 per well. Significant additional savings would accrue to the State due to less laboratory, data management and reporting activity.

These are only a few examples of contaminants required to be regulated where occurrence data was not adequate to justify regulation. The statement in the July 15 letter that contamination is widespread is simply misleading with regard to public water systems. There is no question about the safety of drinking water for approximately 95 percent of the population served by community public water systems. People are not willing to spend money, nor should they be expected to, when there is no commensurate public health benefit.

Drinking Water Chlorination

In January 1991, the first cholera epidemic to strike the Americas in more than a century struck Peru. By the end of 1991, 300,000 cases - including 3,000 fatalities - were reported in Peru. Since then, the World Health Organization has received reports of more than 120,000 additional cases - and 700 deaths - in Ecuador, Colombia, Brazil and Central America.

In the United States, drinking water is chlorinated (disinfected) to prevent typhoid, cholera and other water borne diseases. Chlorine however, also combines with organic compounds (which vary significantly from one surface water supply to another and from surface water to ground water) to create disinfection by-products. Other methods of disinfecting drinking water exist, but

"Frankly, radon in drinking water is a very small contributor to radon risk except in rare cases and the Committee suggests that the Agency focus its efforts on primary rather than secondary sources of risk."

25 New Contaminants Every Three Years

In addition to the 83 contaminants required to be regulated under the Safe Drinking Water Act, the agency is required to add 25 to the list every 3 years regardless of occurrence, public health benefit or any other consideration. The provision must be deleted and a means of identifying those contaminants of public health concern developed.

These are only some of the issues and problems associated with implementation of the Safe Drinking Water Act. Most of the problems identified with the Act, however, can be remedied. The water supply community is committed to developing recommendations to improve the Safe Drinking Water Act and to working with members of Congress to ensure that the Federal statute is one that works and is attainable by all water suppliers, large and small, municipal and investor-owned.

* EPA was allowed to make seven substitutions to the list of 83.



Fact Sheet on Water Chlorination

On July 1, 1992, the Journal of the American Public Health Association published an article by Robert Morris and coworkers reporting a weak but positive association between the consumption of chlorinated drinking water and the incidence of bladder and rectal cancer. The authors performed a statistical evaluation called a meta-analysis from epidemiology studies published between 1966 and 1991. Their results are similar to what has previously been reported by Cantor et al. in 1987.

Although a positive association was reported, this study does not demonstrate a causal association between chlorinated drinking water and cancer. The studies used in this analysis have also been reviewed by the International Agency for Research on Cancer (IARC). IARC considered these studies to be inadequate for determining the carcinogenicity of chlorinated drinking water in humans. EPA currently supports the IARC conclusions. In addition, EPA continues to support the disinfection of drinking water for the purpose of reducing the risk of waterborne disease. The known risk of waterborne disease in humans that occurs if water is not disinfected is much greater than the theoretical risk of developing cancer from the consumption of chlorinated drinking water.

The risk of cancer from chlorinated drinking water is often associated with organic by-products produced when chlorine is added to water containing organic material. EPA established a regulation of 0.1 milligram per liter (mg/L) in 1979 to control one group of by-products, the trihalomethanes, which includes chemicals such as chloroform. EPA is currently revising that regulation to reflect current scientific developments. In addition, EPA is developing new regulations for other by-products and the disinfectants themselves. The regulations are scheduled for proposal in June, 1993 and are to be finalized in June, 1995.

Water Chlorination - Background

- Chlorine is added to water to kill bacteria, viruses and other microorganisms that cause disease.
- Chlorination first began in the early 1900s. As a result, diseases such as cholera and typhoid have been nearly eliminated.
- In 1974, chloroform was found to occur in water following chlorination. Additional byproducts have since been identified as byproducts of the reaction between chlorine and organic material found in water.
- Chloroform, a trihalomethane (THMs), is an animal carcinogen. Some of the other by-products have also been shown to cause cancer or other adverse health effects in animals.
- EPA established a regulation in 1979 that limited the amount of THMs to 0.1 mg/L for water supplies serving 10,000 people or more.
- In the 1980s, several epidemiology studies reported an increased risk of bladder, colon and rectal cancer in individuals drinking chlorinated drinking water, however studies evaluating the carcinogenicity of chlorine in animals are negative.
- The International Agency for Research on Cancer (IARC) reviewed the available epidemiology data in June 1990 and concluded that they were inadequate to determine the carcinogenicity of chlorinated drinking water.

Tiny Cancer Risk in Chlorinated Water

By LAWRENCE K. ALTMAN

Chlorinated drinking water has been linked to small increases in the rates of rectal and bladder cancer in a new analysis by researchers at Harvard University and the Medical College of Wisconsin.

The findings, reported today in the American Journal of Public Health, are drawn from a combination of 10 previous studies. Using statistical methods, the researchers found that the slightly higher rates of the two cancers seemed to correlate with the amount of byproducts produced by chlorinated water. Previous studies had offered contradictory findings, but many of them, taken by themselves, were not statistically significant.

About three-fourths of the water supply in the United States is chlorinated. The degree of chlorination varies widely, depending largely on the source of the water and the contaminants present in it. Also, the studies the researchers analyzed were done in the 1970's, when allowable levels of chlorination were substantially higher than they are now.

One Peril Is Greater

The authors and other experts stressed that the new study should not lead to stopping chlorination. "The potential health risks of microbial contamination of drinking water greatly exceed the risks" of cancer, the authors said.

But the new study is likely to push government and industry harder to find more effective alternatives for chlorination to disinfect water supplies, epidemiologists and experts in water safety said in interviews.

Scientists are handicapped in evaluating the benefits and hazards of chlorination because they do not know how many cases of serious infection would occur if disinfection of water supplies was stopped.

Although the study found the risk of cancer from chlorinated water to be small, the authors calculated that it accounted for 6,500 cases of rectal cancer and 4,200 cases of bladder cancer in the United States each year. Each year, 47,000 cases of bladder cancer and 44,000 cases of rectal cancer are diagnosed in the United States.

Federal Standards Change

The study team was headed by Dr. Robert D. Morris of the Medical College of Wisconsin in Milwaukee. It comes at a time when previously-reported studies have suggested that existing American chlorination levels are too low to prevent many cases of gastro-intestinal illness.

The 10 studies that Dr. Morris evaluated were carried out in the 1970's. Because Federal standards for the amounts of chlorinated byproducts allowed in water were tightened in 1979, the risk of the two cancers may be lower than indicated in the study found by Dr. Morris.

Experts have warned that if chlorination standards are relaxed in the United States, areas of the country could experience epidemics of cholera and other diseases. Such epidemics have occurred recently in areas of South America where chlorination was stopped or standards lowered, the experts said.

"This is a real important drinking-water issue that has to do with the health of every American," said Ronnie Levin, an official of the Environmental Protection Agency.

Question of Balance

Ms. Levin, who is a policy officer in the research and development section at the E.P.A., said the issue involved balancing chlorination's benefits in preventing large numbers of infections against a small risk of cancer.

Dr. Morris's study will make it easier to evaluate the risks and the benefits of chlorination, Ms. Levin said, and "it is likely to push research about alternative disinfectants."

Chlorination was first used to protect public drinking water at the end of the last century, and it has been credited

with preventing typhoid and many other water-borne diseases.

In 1893, chlorination was used to treat sewage effluent at Brewster, N.Y., to protect New York City water. In 1908, chlorination was used successfully to stop the spread of typhoid in Chicago by treating contaminated drinking water at the stockyards. That was five years after the first continual use of chlorine in water treatment, in the small Belgium town of Middelkerke.

Alarm Stems From 1974

Thereafter, chlorination of water supplies spread rapidly. Today, virtually all surface water is disinfected, and chlorination is the overwhelming choice for treating public water supplies. Ground water is chlorinated less often. Private wells and bottled water are generally not chlorinated.

Concern about cancer from chlorinated drinking water stems from the discovery in 1974 that the combination

Accepting one
small risk to
ward off a much
larger one.

of chlorine and organic compounds in drinking water could produce chloroform and other potentially dangerous byproducts.

The discovery led to a number of studies. But they came up with inconsistent and conflicting results.

Dr. Morris has degrees in engineering and medicine, and his main interest is in environmental health hazards. To help clarify the issue of chlorinated drinking water and cancer, he turned to a new statistical method, called a meta-analysis, while working at the Harvard University School of Public Health in Boston.

Meta-analysis aims at gleaning more information from existing data by pooling the results of many smaller studies and applying one or more statistical techniques. The larger numbers obtained by combining studies can provide a greater statistical power than any of the individual, smaller studies. The method can produce a unified result from diverse, apparently contradictory studies.

Taking a Second Look

In the chlorinated water and cancer controversy, Dr. Morris reasoned that a standard review of literature might erroneously conclude that no statistically significant risk exists when a meta-analysis might show one.

By pooling data from 10 published studies that met the criteria for the meta-analysis, Dr. Morris's team found that the relative risk for bladder cancer was 1.21. For rectal cancer it was 1.38. In other words, people drinking chlorinated water had a 21 percent greater risk of getting bladder cancer, and a 38 percent greater risk of getting rectal cancer than those who drank non-chlorinated water.

Dr. Morris said a new study conducted in Colorado and reported at a recent meeting of the Society for Epidemiologic Research found a relative risk of 1.2 for chlorination and bladder cancer. The study was reported by Mike McGeehin of the Federal Agency for Toxic Substances and Disease Registry in Atlanta, who did not return calls to his office.

There is a wide variation in the amount of chlorinated byproducts found in water. "If you take water out of the Potomac, and add chlorine to it, you are going to get more byproducts than if you take water out of Lake Superior and add chlorine to it," Dr. Morris said.

Hunting the Culprit

Scientists do not know what byproduct is the most important carcinogen in chlorinated water. One suspect is chlorinated hydroxy-furanone.

Experts said the second-most-common form of disinfection was chloramination, which adds both chlorine and ammonia to filtered drinking water to form chloramines. This is done to reduce the amount of byproducts.

An even less frequent form is ozone, although chlorine often is added in this process. Ozone byproducts have not been fully evaluated for safety.

As scientists explore newer methods and ask whether they are safer, they must determine whether the question relates to disinfection or the hazards of byproducts.

Dr. Thomas C. Chalmers, a co-author, said it took more than a year and rejection by three journals before the team got its analysis published.

Science, the Journal of the American Medical Association, and the American Journal of Public Health all rejected the paper, Dr. Chalmers said.

Generally, scientific journals only tell the authors why they turn down a paper. But Dr. Chalmers said the experts who reviewed the paper "were uneasy about informing people about this problem until some alternative was available" for fear that people would demand an end to chlorinating water.

"But we felt people ought to have the data, not suppress it," Dr. Chalmers said. So when The American Journal of Public Health appointed a new editor, the authors sent their paper in again, and it was accepted.

D-49. SAFE DRINKING WATER

49.1 INTRODUCTION

THE GOVERNORS ARE STRONGLY COMMITTED TO AGGRESSIVELY PROTECTING PUBLIC HEALTH AND ENVIRONMENTAL QUALITY. THEY CONSIDER FULL AND EFFECTIVE IMPLEMENTATION OF ENVIRONMENTAL PROGRAMS A FUNDAMENTAL STATE RESPONSIBILITY.

THE GOVERNORS ARE TROUBLED, HOWEVER, BY TWO INCREASINGLY PROMINENT OBSTACLES TO STATE COMPLIANCE WITH FEDERAL ENVIRONMENTAL REQUIREMENTS. FIRST, THE GOVERNORS NOTE A RAPIDLY INCREASING DISPARITY BETWEEN DEMANDS THE FEDERAL GOVERNMENT PLACES ON STATES AND LOCALITIES AND THE RESOURCES IT PROVIDES TO MEET THOSE DEMANDS. FEDERAL ENVIRONMENTAL PROGRAMS DELEGATED TO STATES ALL TOO OFTEN REQUIRE SIGNIFICANTLY MORE RESOURCES THAN STATES AND LOCAL GOVERNMENTS HAVE AVAILABLE.

SECOND, CONGRESS HAS BEEN SLOW TO RECOGNIZE THE VALUE OF RISK-BASED RULEMAKING AND TO INCORPORATE RISK ASSESSMENT PRINCIPLES INTO THE LAW. AS A RESULT, SOME REQUIREMENTS ARE NOT JUSTIFIED BY SIGNIFICANT RISKS TO PUBLIC HEALTH OR THE ENVIRONMENT, AND THE COSTS OF A REQUIREMENT SOMETIMES OUTWEIGH ITS BENEFITS.

THE SAFE DRINKING WATER ACT PROGRAM IS AN UNFORTUNATE ILLUSTRATION OF THESE TWO OBSTACLES TO STATE COMPLIANCE. CONGRESS ORIGINALLY EXPECTED THE ACT TO APPLY TO SOME 40,000 WATER SYSTEMS. BUT BY 1977 THE STATES HAD IDENTIFIED MORE THAN 220,000 SYSTEMS SUBJECT TO FEDERAL REGULATION. AS OF MARCH 1992, STATES AND LOCAL GOVERNMENTS WERE REQUIRED TO IMPLEMENT EPA REGULATIONS CONTROLLING THIRTY-FIVE CONTAMINANTS. THAT NUMBER WILL JUMP TO SIXTY-TWO BY DECEMBER 1992, TO EIGHTY-FOUR BY NOVEMBER 1993, AND TO 111 BY THE BEGINNING OF 1997.

STATES AND LOCALITIES HAVE MADE SUBSTANTIAL PROGRESS IN IMPROVING THE PROTECTION OF DRINKING WATER SUPPLIES. HOWEVER, BECAUSE OF LIMITED FEDERAL FINANCIAL ASSISTANCE, STATES ARE CURRENTLY FACING AN ANNUAL SHORTFALL OF MORE THAN \$200 MILLION IN THE FUNDS NEEDED TO COVER THE REGULATORY COSTS OF THIS PROGRAM. THE SHORTFALL CAN ONLY BECOME MORE SERIOUS AS THE STATES ATTEMPT TO RESPOND TO THE ADDITIONAL RULES. IN ADDITION, THIS FIGURE DOES NOT INCLUDE THE PROGRAM'S CAPITAL OR OPERATIONAL COSTS, SIGNIFICANT EXPENSES GENERALLY REFLECTED IN USER FEES.

STATES AND LOCALITIES ARE STRUGGLING TO SUSTAIN THE PROGRESS THEY HAVE ALREADY MADE AND TO FOCUS ANY ADDITIONAL AVAILABLE RESOURCES ON CONTAMINANTS THAT POSE THE GREATEST RISK TO USERS OF PUBLIC WATER SUPPLIES.

THIS CHALLENGE IS PARTICULARLY DIFFICULT NOW BECAUSE IMPLEMENTATION OF THE SAFE DRINKING WATER ACT MUST COMPETE NOT ONLY WITH OTHER ENVIRONMENTAL PROGRAMS REQUIRED UNDER, FOR EXAMPLE, THE CLEAN AIR ACT, THE CLEAN WATER ACT, AND RCRA, BUT ALSO WITH INCREASING DEMANDS FOR HEALTH CARE, EDUCATION, CORRECTIONAL FACILITIES, AND OTHER SOCIAL PROGRAMS AT A TIME WHEN MOST STATE BUDGETS ARE SHRINKING OR GROWING ONLY MODESTLY.

BUT DESPITE THESE STRESSES, THE STATES BELIEVE IT IS POSSIBLE TO DEVISE A DRINKING WATER PROGRAM THAT PROTECTS PUBLIC DRINKING WATER SUPPLIES, BUT REMAINS AFFORDABLE. SUCH A PROGRAM MUST REVOLVE AROUND RISK-BASED PRIORITY SETTING, FOCUSING ON THE MOST SERIOUS HEALTH RISKS, AND AVOIDING REQUIREMENTS THAT RESULT IN LITTLE HEALTH BENEFIT; ALLOW STATES INCREASED DISCRETION IN ALLOCATING RESOURCES; AND PLACE A GREATER EMPHASIS ON POLLUTION PREVENTION.

49.2 EIGHT-POINT PROGRAM

49.2.1 PREFACE. THE GOVERNORS PROPOSE AN EIGHT-POINT PROGRAM TO REVITALIZE IMPLEMENTATION OF THE SAFE DRINKING WATER ACT. THIS PROGRAM WILL REQUIRE A NEW AND STRONGER PARTNERSHIP AMONG THE STATES, THE ENVIRONMENTAL PROTECTION AGENCY, AND CONGRESS.

ALTHOUGH EACH OF THE EIGHT INITIATIVES WOULD HELP RESOLVE CURRENT PROBLEMS, THE ENTIRE PROGRAM MUST BE ADOPTED TO ENSURE THE AMERICAN PUBLIC ADEQUATE PROTECTION OF DRINKING WATER SUPPLIES. IF ONLY SOME POINTS ARE ADOPTED, IMPLEMENTATION REPORTS ARE LIKELY TO CONTINUE TO FALTER. IN PARTICULAR, THE GOVERNORS FEAR THAT THEIR DESIRE TO RETAIN PRIMACY WILL BE THWARTED UNLESS THESE RECOMMENDATIONS ARE ADOPTED IN FULL.

THE PROPOSED EIGHT-POINT PROGRAM DEMANDS ACTION IN THREE MAJOR AREAS: MAKING STATUTORY CHANGES, IMPROVING PROGRAM EFFICIENCY, AND INCREASING THE AVAILABILITY OF RESOURCES.

49.2.2 MAKING STATUTORY CHANGES. IT WILL NOT BE POSSIBLE TO MAKE THE SAFE DRINKING WATER ACT WORK PROPERLY WITHOUT CONGRESSIONAL ACTION. THE GOVERNORS BELIEVE THAT THE FOLLOWING THREE ACTIONS ARE THE MINIMUM NECESSARY:

1. UNTIL THE SAFE DRINKING WATER ACT IS REAUTHORIZED, CONGRESS SHOULD freeze implementation of the national primary drinking water regulations of the thirty-five rules that states have already implemented and place a moratorium on promulgation of new rules. Congress should require that EPA conduct risk assessment studies of contaminants referenced in and listed pursuant to Safe Drinking Water Act section 1412. Congress should require that EPA promulgate and/or implement national primary drinking water regulations for any contaminants if the risk-assessment studies indicate that regulation is justified by significant risk to public health. TAKE ACTION TO ENSURE THAT STATES AND LOCALITIES ARE NOT REQUIRED TO IMPLEMENT NEW REGULATORY REQUIREMENTS UNLESS THEY ARE RATIONAL, ARE REASONABLE, AND ADDRESS SIGNIFICANT RISKS AND RESOURCES ARE PROVIDED TO HELP IMPLEMENT THEM.
2. CONGRESS SHOULD REAUTHORIZE THE SAFE DRINKING WATER ACT AS SOON AS FEASIBLE AND ELIMINATE RIGID PROVISIONS THAT REQUIRE REGULATION OF SPECIFIED NUMBERS OF CONTAMINANTS REGARDLESS OF THE RISK THEY PRESENT. THE LAW SHOULD ALLOW EPA AND THE STATES TO FOCUS ON THE MOST SIGNIFICANT REMAINING RISKS.
3. IF THE ADMINISTRATIVE PROPOSALS RECOMMENDED IN ITEMS 5 AND 6 ARE NOT ALLOWED UNDER EXISTING STATUTORY AUTHORITY, THEY SHOULD BE INCORPORATED IN THE REAUTHORIZATION OF THE SAFE DRINKING WATER ACT. THE GOAL IS TO HAVE CLEAR AND SIMPLE STANDARDS AND TO ALLOW STATES MAXIMUM FLEXIBILITY IN MEETING THESE STANDARDS.

49.2.3 IMPROVING PROGRAM EFFICIENCY. THE GOVERNORS BELIEVE THE ENVIRONMENTAL PROTECTION AGENCY CAN MAKE THE SAFE DRINKING WATER PROGRAM MORE EFFICIENT BY MODIFYING THE WAY IN WHICH STATES AND LOCAL GOVERNMENTS IMPLEMENT THEIR RESPONSIBILITIES, AND MAKE THE FOLLOWING RECOMMENDATIONS:

4. THE ENVIRONMENTAL PROTECTION AGENCY AND THE STATES SHOULD AGREE TO FULLY IMPLEMENT THE RISK-BASED APPROACH EMBODIED IN THE PUBLIC WATER SUPPLY SYSTEM PROGRAM PRIORITY GUIDANCE ADOPTED ON JUNE 14, 1992. STATES SHOULD HAVE FLEXIBILITY TO ADDRESS THE MOST SERIOUS ENVIRONMENTAL PROBLEMS FIRST AND TO SHIFT FUNDING BETWEEN ENVIRONMENTAL PROGRAMS TO TARGET THE MOST SIGNIFICANT RISKS.
5. IN CONSULTATION WITH THE STATES, EPA SHOULD EXAMINE EXISTING ADMINISTRATIVE AUTHORITIES TO IDENTIFY WAYS TO ALLOW STATES AND LOCALITIES TO FOCUS RESOURCES ON THE MOST SIGNIFICANT PUBLIC HEALTH RISKS. WITH AP-

PROPRIATE PUBLIC PARTICIPATION. STATES SHOULD BE ALLOWED FLEXIBILITY TO DETERMINE THE SCOPE OF MONITORING REQUIREMENTS. EPA SHOULD ALSO STREAMLINE IMPLEMENTATION OF VARIANCE, EXEMPTION, AND WAIVER PROCEDURES.

6. THE ENVIRONMENTAL PROTECTION AGENCY SHOULD OFFER INCENTIVES TO STATES AND LOCALITIES TO ENCOURAGE POLLUTION PREVENTION. FOR EXAMPLE, EPA SHOULD REDUCE EXPENSIVE MONITORING AND OTHER REGULATORY REQUIREMENTS FOR WATER SUPPLY SYSTEMS THAT HAVE IMPLEMENTED EFFECTIVE WELLHEAD AND WATERSHED PROTECTION INITIATIVES.

49.2.4 INCREASING THE AVAILABILITY OF RESOURCES. NO MATTER WHAT OTHER CHANGES ARE MADE, ADEQUATELY PROTECTING THE AMERICAN PUBLIC'S DRINKING WATER SUPPLIES WILL REQUIRE ADDITIONAL RESOURCES. GIVEN THE SEVERE BUDGET CONSTRAINTS FACING ALL LEVELS OF GOVERNMENT, EACH LEVEL MUST CONTRIBUTE. THE GOVERNORS MAKE THE FOLLOWING RECOMMENDATIONS:

7. IF STATES HAVE SUFFICIENT FLEXIBILITY, AN INCREASE IN FEDERAL GOVERNMENT RESOURCES APPROPRIATED TO STATES FOR IMPLEMENTATION OF THE SAFE DRINKING WATER ACT TO \$100 MILLION WILL BE ADEQUATE TO HELP MANAGE THE PRESENT FEDERAL REGULATORY BURDEN ON PRIMACY STATES. FUTURE MANDATES SHOULD NOT BE IMPOSED UNLESS FEDERAL RESOURCES ARE PROVIDED TO MEET 75 PERCENT OF THE STATES' REGULATORY COSTS.
THE GOVERNORS NOTE THAT FEDERAL MONIES COVER STRICTLY REGULATORY COSTS AND WILL NOT HELP LOCALITIES AND WATER USERS MEET SIGNIFICANT SYSTEM OPERATION, MONITORING, AND CAPITAL COSTS.
8. THE STATES SHOULD COMMIT THEMSELVES TO SEEKING ADDITIONAL RESOURCES FROM GENERAL FUNDS OR SPECIAL FEES TO HELP CLOSE THE REMAINING RESOURCE GAP.

THE GOVERNORS BELIEVE THAT, IN SPITE OF CURRENT RESOURCE LIMITATIONS, THESE EIGHT INITIATIVES WILL SHAPE A PRACTICABLE PROGRAM THROUGH WHICH FEDERAL, STATE, AND LOCAL GOVERNMENTS CAN WORK TOGETHER TO ENSURE THAT PUBLIC DRINKING WATER SUPPLIES ARE SAFER FOR ALL AMERICANS IN THE MOST EFFICIENT POSSIBLE MANNER.

Physical sciences dominate Japan's special grant awards

Tokyo. The physical sciences and technology have moved ahead of biology on this year's list of grants to individual scientists announced last week by the Japanese Ministry of Education, Science and Culture. Researchers in physics, chemistry and astronomy received seven of the 11 awards in the ministry's 'special distinguished' grant category, a competition that has been dominated by the life sciences during most of the past decade.

The grants, worth about ¥100–¥300 million (US\$750,000–\$2.2 million) over three to five years, are meant to support "internationally renowned research that is likely to give outstanding results". They provide an indication of where some of Japan's best basic research is being done.

One of the largest grants — ¥283 million for five years — goes to Toshimitsu Yamazaki of the Institute for Nuclear Study of Tokyo University. Yamazaki will use the low-energy antiproton beam at the European high-energy physics laboratory (CERN) in Geneva to study anomalously long-lived hadronic atoms, such as antiprotons embedded in helium. The grant will further strengthen the collaboration between CERN and Japan's leading national university.

Daiichiro Sugimoto of Tokyo University's department of Earth science and astronomy, who has developed a high-speed

computer to model evolution of star clusters and galaxies (*Nature* 345, 33; 1990), gets ¥189 million for five years to upgrade his computer to carry out teraflop calculations of such many-body problems. Sugimoto intends to model not only the behaviour of stars and galaxies but also the molecular dynamics of, for example, proteins.

Another user of super-high-speed technology is Akira Hasegawa of Osaka University's department of communications engineering. He receives ¥185 million over five years to test an optical fibre transmission system based on the idea that solitons can transmit vast amounts of multichannel data (40 gigabits) over tens of thousands of kilometres.

In contrast with previous years, only four awards went to those in the biological sciences. But two of them are among the largest. Tasuku Honjo of Kyoto University receives ¥184 million over three years to elucidate the molecular and regulatory mechanism of programmed cell death, an important element in understanding embryogenesis and autoimmune diseases. And Nobutaka Hirokawa of Tokyo University faculty of medicine receives the largest grant — ¥290 million for four years — to study the molecular architecture, dynamics and function of the neuronal cytoskeleton.

David Swinbanks

Bush delays new risk guidelines

Washington. A US proposal to relax standards to assess the risk posed by chemicals in food and in the environment has been delayed by the Bush administration, disappointing those who believe that current methods are outdated and imprecise. Last week's decision could have the unintended effect of killing the plan: Bush's challenger in the forthcoming presidential election, Democrat Governor Bill Clinton, is said to be opposed to the notion of easing restrictions.

The decision is the latest move in an extended government debate over how to assess risk. Many researchers believe that current models err so far on the side of safety that chemicals posing nearly negligible risk are either banned or subjected to costly regulation.

Traditionally, each federal agency chooses its own risk assessment methods. But the proposed executive order would have created an independent panel of scientists working out of either the White House or the US National Institutes of Health to set

risk assessment procedures for all federal agencies. The order would also have permitted new assessment methods allowing chemicals that pose little risk at low levels.

According to the White House, the executive order has been held in abeyance because Bush administration officials could not pay it proper attention during a presidential campaign. Others point to more partisan politics: environmental and consumer groups represent a constituency that cannot be ignored in a close election.

If President Bush wins in November, he is expected to revive the proposal. But if Clinton wins, many say he would not undercut his support among environmentalists by revising risk assessment.

"I think they missed the opportunity to bring the weight of scientific opinion to bear" on risk assessment, says Aaron Wildavsky, a political science and public policy professor at the University of California, Berkeley, who believes that Clinton will win the election. "They've let it drop, and now it's gone."

Traci Watson

NEWS IN BRIEF

Washington. The European space probe Giotto has been put to electronic sleep and is heading back to Earth after its successful encounter last month with comet Grigg-Skjellerup. But the seven-year-old spacecraft, which flew by comet Halley in 1986, has probably carried out the last of its scientific duties.

Although Giotto is projected to come within 220,000 km of Earth in 1999, it is unlikely to pass near another comet. Even if it did, it probably lacks the fuel to manoeuvre into position to make observations. Finally, European Space Agency officials are not sure that they can afford to maintain for the rest of the decade the groundbased hardware used to communicate with Giotto. **J.M.**

New Delhi. The Indian government says that the Russian space agency has promised to honour a contract to purchase cryogenic rocket engines that has triggered a boycott by the United States.

"The contract between ISRO [Indian Space Research Organization] and Glavkosmos remains in force and is being implemented," India's science minister, P.R. Kumaramangalam, told parliament last week. He said that Russian officials have "reassured" India that they will carry out the contract. India has already paid Russia more than a third of the \$80 million it will cost to acquire two engines and the accompanying technology.

The United States believes that the contract violates an international agreement to prevent the spread of nuclear weapons technology, but India and Russia insist that the technology will be used only for civilian purposes. The rockets will be part of a geostationary launch vehicle to be tested in 1995. **K.S.J.**

Washington. Denmark's Medical Research Council has released the country's first plan for dealing with allegations of scientific misconduct and ethical violation in research. Detailing eight well-known cases of misconduct in the United States and other countries (but none in Denmark), the council said that a contributing factor was the lack of established procedures for dealing with such abuses in those countries. It recommended new guidelines on clinical research ethics and conflict of interest, and the creation of a national committee to review charges of misconduct.

The committee, which will be functioning by October, will have a high court judge as chairman and six health science researchers as members. When appropriate, the committee is expected to set up special *ad hoc* committees to investigate specific cases. The report also recommends that scientists under investigation be given the right to representation by an attorney, appeal, cross-examination and examination of the data. **C.A.**

The right balance

First came the good news. President Bush had extended his 90-day moratorium to ease the regulatory burden on America's fragile economic recovery. But the bad news remained: cutting through the thicket of restrictive red tape won't be easy.

By any measure, the regulatory web has widened of late. At the end of 1991, some 4,900 federal regulations were in development, nearly 900 of them new. According to the Washington University Center for the Study of American Business, federal regulatory agencies now employ more than 122,000 people to protect us and will spend an estimated \$13 billion this fiscal year on their activities.

Other regulatory costs are included in the higher prices consumers pay for products and services. According to Thomas D. Hopkins, an economics professor at the Rochester Institute of Technology, the latest evidence suggests that consumers pay about \$400 billion a year more for federal regulations than shows up in the budget. That averages out to more than \$4,000 per household.

Between 1977 and 1988, deregulation of the airline, trucking and railroad industries and decontrol of oil and natural gas prices led to a decline in overall regulatory costs. However, Professor Hopkins says, "new regulations, mostly in the environmental area, have swamped the cost reductions stemming from the earlier reforms." The Environmental Protection Agency puts the cost of complying with its rules in 1990 at some \$90 billion. And that's without future costs of complying with the 1990 Clean Air Act—an additional \$25 billion to \$30 billion a year. Consumers will eventually pick up the tab.

Of course, many regulations are essential. The problem arises when Congress,

which writes the laws, and the regulators, who are responsible for implementing them, fail to weigh the intended benefits against the real costs. The result: a staggering waste of time, people and money that sets the economy in slow motion and smothers productivity and innovation. Fewer jobs are created, fewer plants built, less innovation spawned, less capital invested. That makes America less competitive in today's global markets.

The solution? Subject all proposed legislation and regulations to cost-benefit analysis—not just in direct costs, but in overall economic impact, too. In health and environmental areas, where benefits are framed in terms of reducing risks, use estimates that best reflect actual risks, rather than the current practice of designing rules to fit "worst case" scenarios. Set realistic performance standards and let industry work out the least costly methods for meeting them.

Without cost-benefit analysis, the rules can end up unreasonable, inefficient or even counterproductive. Like, for example, the 1990 Corporate Average Fuel Economy standards that a federal appeals court overturned earlier this year when it found the government had ignored the reduced safety to passengers in restricting the availability of larger cars.

Clearly, an overhaul of the regulatory machine is overdue. It's time for a balanced approach instead of quick-fix, prescriptive remedies with huge long-term price tags. It's time to replace rhetoric with reason in cost-benefit analysis that lets scientific and economic realities guide the process. It's time for all parties involved—Congress, regulators, scientists and industry—to work together in forging sound regulatory policy that's compatible with the nation's economic needs.

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MEMORANDUM

BY TELECOPY
202/224-0580

TO: Katie McGinty
FROM: Mike Vandenberg
DATE: July 23, 1992
RE: Follow-up on Environmental Issues

As promised, I am passing along several ideas about the CERCLA program and new environmental initiatives that should have positive economic impacts. I will be leaving Washington on Saturday to become the Deputy Director of Clinton's North Carolina campaign. If you need additional information on any of these points, I can be reached in North Carolina at (919) 781-2163 or in Washington at (202) 543-3781. You also may want to contact Dave Hayes, the attorney I work with most closely. He can be reached in Washington at (202) 637-2288.

I. CERCLA\Superfund

- Contractor fraud and mismanagement have drained millions of dollars from Superfund cleanups. Recent Congressional hearings chaired by Rep. John Dingell exposed contractor charges for a variety of inappropriate items, including a corporate jet, a party band, a fishing license and candy bars with a contractor's insignia.

- Superfund site cleanups could be prioritized to meet other important goals, such as the revitalization of the cities. For example, EPA could emphasize the cleanup of former industrial sites in inner cities to facilitate the construction of new manufacturing facilities. These cleanups also could address concerns about environmental justice.

- EPA has increased Superfund enforcement in recent years with its "Enforcement First" policy, but at many sites it has spawned needless litigation by singling out a small subset of the potentially responsible parties for enforcement action and by its reluctance to enter into de minimis settlements. Rep. Dingell's 1991 correspondence with Administrator Reilly highlights these issues. The resulting litigation has contributed to the high percentage of total CERCLA expenditures devoted to attorneys' fees.

- The closing of military bases is creating an opportunity for the creation of nature reserves and for public or private development, but CERCLA Section 120(h)(3)(B)(i) requires the federal government to certify that a cleanup "has been taken" before transferring the property. Although EPA has interpreted

this provision narrowly, the restriction slows down the conversion of military bases to other uses without enhancing the environment (the government has to cleanup the sites in any event). Fort Ord in California is a good example: a plan to create a college campus for environmental studies is being delayed because of on-site contamination. Rep. Panetta has been involved in this issue and introduced H.R. 4016, which would enable clean portions of military bases to be transferred while the cleanup of other portions is ongoing.

II. New Environmental Initiatives

A number of innovative new programs with potentially positive economic impacts are under development in the U.S. and abroad:

- Several U.S. companies have engaged in voluntary pollution prevention efforts that have reduced total production costs as well as environmental impacts.

- Japan has a "take-back" law in place that will require manufacturers of certain products to take the products back from consumers after the products' useful lives. Germany is considering a similar measure, and the idea has been discussed on the state level in the U.S. The take-back laws will provide incentives for companies to design products with the ultimate disposal or re-use in mind.

Dave Hayes can provide you with more information on the current state of these initiatives and the sites in the U.S. that may showcase their implementation. In addition, I would be happy to collect more information or assemble a group for you to meet with on these issues. Best of luck on the road.



Fred Krupp, Executive Director

Al,

I thought you'd
be interested in
the attached.

Best,
Fred



National Headquarters
257 Park Avenue South
New York, NY 10010
(212) 505-2100
Fax: 212-505-2375

MEMORANDUM

To: Friends of EDF
From: Fred Krupp
Date: July 10, 1992
Re: New joint project with General Motors

Fred Krupp
Executive Director

I wanted you to know that EDF and General Motors have begun a joint project to explore ways to improve urban air quality and reduce sources of greenhouse gases. We are announcing this project today; the press release and joint agreement are attached.

Both EDF and GM recognize that vehicles and transportation systems are major contributors to air pollution and that technical and policy changes could lead to substantial improvements. By combining our skills, we hope to identify and implement measures that will maintain air quality standards while increasing transportation efficiency.

We hope this collaboration will prove as successful as our effort with McDonald's, which led that company to adopt a 42-point waste reduction plan. The GM project is on an even larger scale. EDF initiated the discussions with GM more than a year ago. EDF scientists, economists, and attorneys have worked intensively with key GM staff to develop our joint plan. No industry is as closely tied to the issues of air quality, global climate change, and American competitiveness as is auto manufacturing. No industry has been more extensively regulated by traditional environmental programs. We believe that the next key breakthrough for both environmental protection and for the auto industry could occur through exploring economic incentives to augment existing environmental requirements.

In our work with GM, we have already discovered that we share a commitment to fashioning policies centered on incentives that link environmental benefits with economic growth. Growing worldwide demand for "green" cars will, EDF believes, require bringing new technology to market. The sooner this happens, the greater the benefits to the American economy, air quality standards, and the manufacturers themselves. While there are no guarantees, we at EDF are hopeful that through this dialogue we will also identify potential new governmental policies that could help spur these developments.

The enclosed materials describe our plans and goals in greater detail. As in our McDonald's project, EDF will accept no money or other support from GM and our name cannot be used in any advertising. I hope you share our excitement as we begin this innovative approach to solving some of the largest environmental problems facing the nation.



Environmental Defense Fund

257 Park Avenue South, New York, NY 10010

NEWS RELEASE

EMBARGOED For Release:

8 July 1992/ 10:30 AM

Contact:

Allan Margolin 212 505-2100

Dan Dudek 212 505-2100

Joe Goffman 202 387-3500

ENVIRONMENTAL DEFENSE FUND INITIATES POLICY DIALOGUE WITH GENERAL MOTORS *Innovative Cooperative Effort Aimed At Rapid Clean Air Progress*

(8 July 1992 -- New York) The Environmental Defense Fund (EDF) announced today that it has initiated a technical and policy dialogue with General Motors (GM) aimed at the speedy development of potential new policies, incentives, strategies and technologies to address a broad range of air pollution issues.

"We approached GM because we believe a dialogue, along with quick implementation of the Clean Air Act and EDF's ongoing research, education and advocacy efforts, can speed the solutions both to the air quality problems plaguing our cities and to longer term problems like global warming," said EDF senior attorney Joe Goffman. "Together we may create incentives to trigger the innovations and creativity needed to achieve those goals."

"Because vehicle emissions play a crucial role in urban air quality, and because EDF is interested in finding new ways to protect the environment, we hope to enlist GM's resources, beyond those already dedicated to meeting their legal requirements, in tackling pollution problems," said Fred Krupp, EDF executive director. "Our successful work with McDonald's shows that sometimes working with business can result in real environmental progress."

In 1990 and 1991 a joint EDF-McDonald's task force developed and implemented a comprehensive solid waste reduction plan for the company and was a guiding force behind McDonald's phase-out of foam packaging.

"As with our work with McDonald's we have a signed agreement which states that we will not accept any monetary or in-kind support from GM at any time," said Krupp. "In addition, it states that we'll continue our vigorous advocacy and public education efforts on behalf of a broad range of environmental policies with complete independence and continue to state our own views, and pursue our own interests and goals, with respect to any matter or activity included in, or related to, the dialogue."

"We'll look at issues ranging from city smog and transportation infrastructure to greenhouse gases and innovative policy instruments to bring about breakthrough clean car technologies," said EDF senior economist Dan Dudek. "At the same time we're looking out for immediate opportunities. For instance, in response to the administration's March announcement of its intention to propose a program to promote the early retirement of older, high-emitting cars, EDF and GM recently gave a briefing to EPA on a model auto scrappage program we jointly created."

The Environmental Defense Fund, a leading, national, NY-based non-profit organization with over 200,000 members, links science, economics, and law to create innovative, economically viable solutions to today's environmental problems.



A JOINT STATEMENT ON A POLICY AND TECHNICAL DIALOGUE BETWEEN THE ENVIRONMENTAL DEFENSE FUND AND GENERAL MOTORS

As part of the commitment of the Environmental Defense Fund ("EDF") to formulating and advocating durable solutions to environmental problems and the commitment of General Motors Corporation ("GM") to its statement of environmental principles and the transportation needs of its customers, both are engaged in a policy dialogue concerning automotive and stationary source emissions. This dialogue reflects a mutual recognition that:

- Mobile sources impact urban ozone smog and emit greenhouse gases;
- The present challenge is to improve environmental quality without sacrificing economic well-being;
- Market-based mechanisms could enhance the performance and cost-effectiveness of environmental programs;
- EDF has historically played a leadership role in the area of emission trading programs; and
- GM has historically been a leader in the development of new emission control technology.

Areas of Discussion: The specific subject matter that may be addressed in the course of this dialogue is set forth below. Additional topics may emerge as the dialogue continues.

- Alternative policy instruments to stimulate the commercial introduction of new automotive technologies (e.g., electric vehicles, ultra-clean vehicles, high-efficiency vehicles, ultra-low-emitting vehicles).
- Measurement and monitoring of automotive emissions.
- Performance and cost effectiveness of vehicle emissions standards and fuels.
- Current research developments concerning the atmospheric chemistry of groundlevel ozone formation.
- Economic and regulatory design elements for alternative models of mobile source and stationary source emissions trading systems including the impact of such elements on existing regulations.
- The role of mobile-source CO₂ and other greenhouse gases in global warming.
- Research on policy instruments for addressing greenhouse gases.
- Impact of regulatory requirements and market incentives on corporate and vehicle design decisionmaking and on consumer response.

- Alternative transportation infrastructure investments.
- Issues concerned with managing vehicle miles travelled.

Dialogue Description: Through this dialogue, GM and EDF seek to expand the knowledge base of the Environmental Defense Fund and General Motors. This dialogue may result in the dissemination of reports, analyses, studies or policy proposals to the public, the media and government decision-makers. The dialogue will proceed according to an open-ended time schedule consisting of approximately monthly meetings of core GM and EDF staff convened for the purpose of detailed discussions of selected topics relevant to the subject matter areas set forth above. Either party may terminate the dialogue at any time.

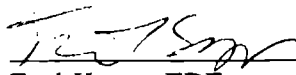
To the extent possible, EDF and GM will rely on expertise within, or accessible to, GM and EDF, but either party or both may use additional expertise. The allocation of costs for retaining outside expertise or for substantial information-gathering activities will be made on a case-by-case basis by mutual agreement of EDF and GM. Where strictly proprietary business statistics, information or processes are involved, GM and EDF will reach prior agreement on access to, protection of, and any future disclosure restrictions pertaining to, such information.

Each organization will pay independently all of its own expenses incurred as a result of its participation in the dialogue. Neither party will accept support, monetary or in-kind, direct or indirect, from the other at any time. Each party shall be free to use the research and information generated during the dialogue in its subsequent work unless restrictions, based on the disclosure of proprietary matters, are mutually agreed upon.

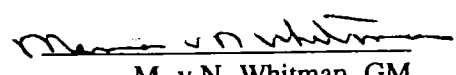
Communications and Publicity: Dissemination of specific results or agreements growing out of the dialogue will be by mutual consent. Otherwise, each organization will continue to carry out its public advocacy activities with complete independence. During the course of these discussions and at the conclusion of the dialogue, each organization shall be free to state its own views, and pursue its own interests and goals, with respect to any matter or activity included in, or related to, the dialogue.

Neither party shall refer to the other's activities in connection with the dialogue, in any marketing, advertising, promotional material, direct mailings or point of sale material unless expressly authorized by the other party. Each organization may communicate with its directors, shareholders, members, and employees about the dialogue.

Participating staff of each organization shall be available to provide up-to-date information on the activities of the dialogue. Media briefings and written releases conducted by GM and/or EDF will make the public aware of significant developments or outcomes, if any, in the course of, and/or at the conclusion of, the dialogue.


Fred Krupp, EDF

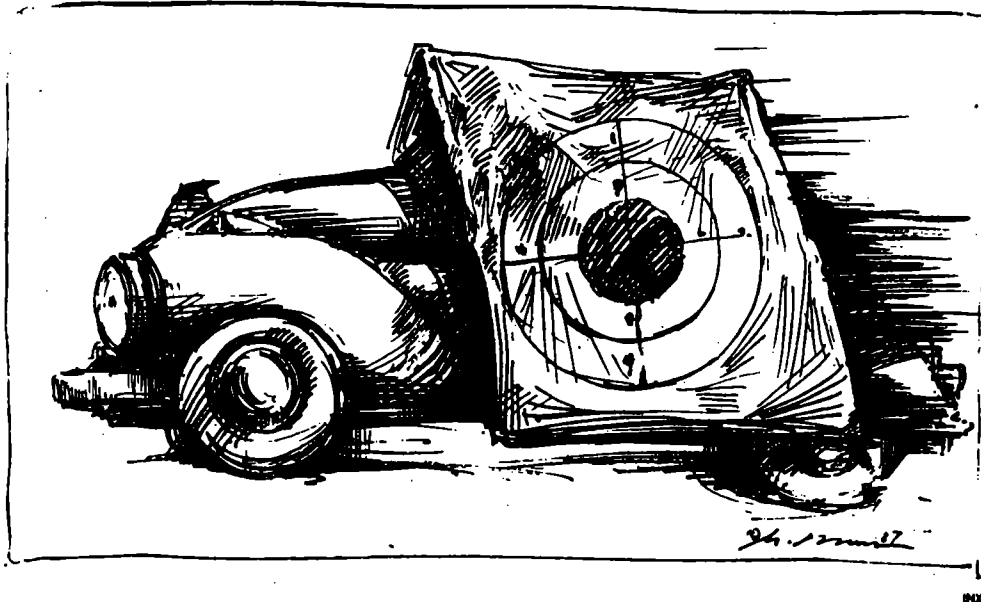
June 5, 1992
Date


M. v.N. Whitman, GM

June 3, 1992
Date

BUSINESS

THURSDAY, JULY 9, 1992



GM, Environmental Group Team *Unusual Collaborators to Study Ways to Cut Pollution*

By Martha M. Hamilton and Warren Brown
Washington Post Staff Writers

The Environmental Defense Fund, which helped McDonald's Corp. develop a comprehensive plan for reducing the amount of garbage it produces, said yesterday it has started a similar dialogue with General Motors Corp. about strategies for reducing air pollution.

The centerpiece of the joint effort by the nonprofit environmental group and the giant automaker will be an attempt to expand market-based incentives for companies to find the most cost-effective ways to clean up pollution, said EDF senior attorney Joe Goffman, who, along with EDF economist Dan Dudek, will be working with GM.

The Clean Air Act set up a system under which utility companies that are able to reduce emissions relatively cheaply can do so

beyond the requirements of the law and sell the cleanup credits to power companies that would have to pay more to achieve the same net reduction in pollution.

Goffman said EDF and GM would study going a step further, looking at the possibility of allowing different industries to swap credits to achieve the most cost-effective pollution reductions.

"If you can get more pollution reduction for less money out of the tailpipe than out of the utility, it makes more sense for them to pay the car companies," Goffman said. If it works the other way, it makes more sense for the automakers to contribute to the cost of cleaning up power plants, he said.

General Motors said it has been discussing different projects with EDF since December

See POLLUTION, D12, Col. 1

Environmental Defense Fund Teams With GM on Pollution

POLLUTION, From D9

1991, when the environmental organization initiated the contact. "They made the first call, and things developed from there," said John V. Dinan, spokesman for GM's research and environmental staff.

Dinan said the GM-EDF tie also can help avoid the "often adversarial" process in which regulators and companies dig in and fortify their positions to the detriment of the public good.

"We have common interests with EDF," Dinan said. "We both want to clean up the environment without doing harm to the economy."

"We've spent billion of dollars to reduce exhaust emissions in cars, and

we've made lots of progress, a 96 percent reduction in hydrocarbons and a 76 reduction in nitrous oxide" since the 1970s, Dinan said. Yet, he said, the industry is under pressure to make more gains in reducing emissions, "gains that will come slowly and at great expense."

By allowing EDF to examine GM's environmental programs, the group can make accurate assessments of what can be accomplished at what cost, Dinan said. "EDF has great credibility with the environmental community," he said. "They can tell people that GM is not lying about the future costs of pollution-free cars."

Goffman said the two organizations already have begun work on a program under which the owners of older, more polluting cars would be giv-

en a bonus to junk them. He said the two groups have made joint presentations to the Environmental Protection Agency and to the California Air Resources Board about how such a program might work.

As it did in its accord with McDonald's, the environmental group signed an agreement that it will not accept either money or in-kind support from GM at any time, said Fred Krupp, EDF's executive director.

"We are separate and distinct organizations. They are independent and so are we. We share common interests; but we still retain the right to disagree," Dinan said.

Although EDF's experience with the fast-food chain provides something of a model for its venture with GM, what will come out of this effort is less clear, Goffman said.

"McDonald's had a very specific dispute with their public over packaging that it wanted to resolve," he said. "This is definitely open-ended in a way the McDonald's effort isn't."

COMPANY NEWS

G.M. Signs an Accord With Environmentalists

By MATTHEW L. WALD

In an unusual expression of détente between industry and environmentalists, General Motors and the Environmental Defense Fund announced yesterday that they had signed an agreement to hold formal discussions on environmental issues.

"Over the last 20 years, it's been each side preaching to the heathen on the other side," said Joseph Goffman, a lawyer with the environmental group. "We've decided to skip the great conversion speeches and talk about what we can talk about."

G.M., the world's largest car mak-

degradable cardboard.

The dialogue required a formal agreement, said Samuel A. Leonard, G.M.'s director of automotive emissions control, so the environmentalists "could not be accused of selling out."

The agreement specifies that the environmental group will not accept funds from G.M. and that G.M. cannot publicize the dialogue in advertising, marketing or point-of-purchase materials, without the group's permission. The fund would be unlikely to give such permission, Mr. Goffman said.

Informal collaboration has been going on since January and has already produced a proposal presented to the Federal Environmental Protection Agency on running a program for scrapping old cars.

President Bush proposed such a program in November, in which a company that faced a requirement to cut air pollution at a factory it owned could instead buy old, high-pollution cars and scrap them, taking credit against other obligations to cut pollution.

2 Heads Better...

Both G.M. and the Environmental Defense Fund have said the joint proposal is better than each could have come up with on its own. The Environmental Defense Fund proposed that pollution-reduction credit be limited to 90 percent of the actual reduction.

"It makes eminent sense when you think about it," Mr. Leonard of G.M. said in a telephone interview yesterday.

G.M., Mr. Leonard said, had added

that the vehicles to be scrapped be selected by actual measurement of tailpipe emissions, rather than simply by their age.

"The process we've gone through on vehicle scrapping has increased our respect for what the other brings to the table," Mr. Leonard said.

The two sides plan to discuss ways to encourage the use of clean vehicles that run on other than gasoline, ways to measure automotive emissions, cost-effectiveness of new fuels and new standards on vehicle emissions, the role of vehicles in global warming and the impact of regulatory requirements on vehicle design.

But they will avoid some long-standing areas of dispute, including fuel economy standards and installing larger canisters on cars to filter the polluting gases that evaporate from fuel tanks.

"We will have to use more traditional methods to solve those," he said, alluding to lobbying in Congress and arguing before the administrative agencies and the courts.

'Conversion speeches' are out, talks on pollution issue are in.

is at the center of a wide range of such environmental issues as urban smog, destruction of the ozone layer and the threat of global warming.

The Environmental Defense Fund, a New York-based nonprofit group with 200,000 members, often sues polluters. Last November, however, it negotiated an agreement with the McDonald's Corporation under which, among other things, the fast-food company replaced its plastic "clamshell" packaging with bio-

GM, Environmental Fund Set Talks on Air Pollution

By a WALL STREET JOURNAL Staff Reporter

WASHINGTON — General Motors Corp., a major polluter and frequent target of environmental group criticism, has joined forces with the Environmental Defense Fund to attack air pollution.

In the "policy and technical dialogue," the two groups said they plan to address topics ranging from electric cars to research on smog to the role of auto emissions in global warming.

"We've been wanting to reach out and talk to people who don't completely share our point of view," said Tom Walton, GM's director of economic policy analysis. He said he has found EDF officials "to be people with a vision that, to a large extent, we share of applying market-based approaches to dealing with some, if not all, environmental problems."

EDF officials acknowledge working with, rather than against, a big polluter such as GM may cause concern in the environmental community. But Fred Krupp, EDF executive director, says the fact that GM is such a big polluter makes it even more important to enlist the company's support. "Cars cause smog and are major greenhouse gas contributors," he said. "GM is the biggest car maker in the world."

The fund, an influential environmental group, has drawn criticism from environmental groups for working with McDonald's Corp. on a waste-reduction task force that led the hamburger chain to abandon its Big Mac clamshell package, among other changes. Many groups eventually expressed support for the results, however.

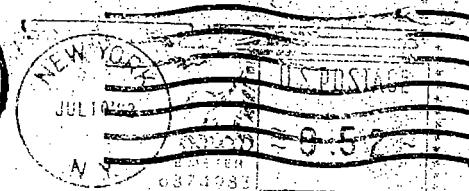


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WP 7-20-92

How Much Smog?

WHEN CONGRESS amended the Clean Air Act two years ago, it tightened the rules on smog and the automobile emissions that contribute to it. Now the Environmental Protection Agency has formally proposed the regulations that it considers necessary to carry out the law. They will mean that getting your car through its emissions inspection every two years is going to get more expensive, and more cars will fail the test. It will also be less convenient, because the new testing equipment is complex and most neighborhood service stations won't be able to afford it. There are real costs involved in raising environmental standards, and this time most of those costs—in both time and money—will fall directly on cars' owners.

The question is whether the benefits of lower smog levels are worth the cost. The answer is that they are probably not. The war on smog has not been entirely won, but there has been great progress and there are now other health and environmental demands that are more urgent. The very substantial cost of environmental regulation requires careful thought about priorities.

The country is now spending about \$115 billion a year on control and abatement of pollution of all sorts. Some of that money is being spent exceedingly well. The elimination of lead in gasoline and the sharp reduction of sulfur in

coal-fired power plants' smoke have saved many lives. At the other extreme, Superfund and its struggle to clean up toxic waste dumps seem to be producing very little in terms of health benefits at an extraordinarily high cost. The issue isn't whether cleaner would be nicer, but whether the same money and effort spent elsewhere could accomplish more.

Even to hold smog at its present levels will require increasing enforcement. The number of miles driven each year by Americans has doubled since 1970 and continues to rise rapidly. EPA's new regulations may turn out to push the inspection-and-maintenance strategy to its limits. Beyond that, it's going to need new ideas. Rather than continuing to resort to increasingly elaborate testing, it might be cheaper simply to pay a bounty to take old cars off the road.

In spite of the trouble and expense, most drivers will undoubtedly go along with the new tests and requirements as a contribution to better air. But they will be correct in thinking that the war on smog, except in a few severely afflicted cities like Los Angeles, has gone about as far as the benefits can justify. There are now other areas—indoor air pollution, for one example—in which the same dollars can produce greater benefits for health.

**PHOTOCOPY
PRESERVATION**

Wash. Post 8-6-92

Air You Breathe

OZONE IN the air you breathe may be a threat to your health, but combating it is disruptive and expensive. Automobiles are responsible for some of it, along with many industrial and commercial processes. Setting a national standard for ozone is a classic exercise in environmental politics, as the Environmental Protection Agency demonstrated again this week. Under the pressure of litigation to force a decision, it reaffirmed its present longstanding standard rather than moving to a tighter one.

Exactly how dangerous to human health is ozone? There's immense controversy over that one—and about whether the effects are transitory, like hay fever, or permanent and cumulative. The ultimate answer will affect, over the years, the kind of car you drive, the fuel that you put into it and the way you commute to work. The plaintiffs in the litigation complain that EPA has been dragging its feet. But the impact on society is sufficiently great, the agency replies, that it cannot afford to get ahead of a broad scientific consensus.

Next question: Even if ozone is dangerous, how does it compare with other threats to public health that also need to be addressed? This country is spending a lot of money on control and reduction of air pollution—currently about \$30

billion a year—and it would be reckless to keep spending more and more to fight ozone if that left no resources for other and greater dangers. Are there more dangerous pollutants in the air? Probably so, indoors; maybe not, outdoors—although that one's also in dispute.

It's fair to argue that a national standard ought properly to tell the public what's safe, not what the bureaucracy thinks is affordable. But a tighter standard immediately triggers federal requirements that cities, including this one, do more to get the ozone levels down.

The EPA is right to be cautious and, in close cases, to move slowly. Its decisions affect too many people's lives and business to allow anything else. It's necessary to acknowledge that if it has underestimated the effects of ozone on people's lungs, some of those people will suffer for it. But that's the nature of all the difficult decisions in environmental protection and public health when policy presses the limits of medical knowledge.

Now the EPA will gather together all of the recent research on ozone and turn it over to its scientific advisory committee to analyze. That might take a couple of years or more. Then the agency will cautiously move toward another review of the ozone standard, feeling its way through a field of science that is only now unfolding.

NYT 8-6-92

Lawn Mower Is New Target In War Against Air Pollution

By MATTHEW L. WALD

To most people, it is a lawn mower, but to the Environmental Protection Agency it is an "uncontrolled mobile source" that becomes part of the suburban swarm adding measurably to smog on a summer's day. And the time has come, the agency says, to clean it up, along with weed eaters, leaf blowers, chain saws and a lot of other off-road gas-powered machinery.

A lawn mower can easily spew as much smog-causing hydrocarbon into the air in an hour as a modern car, experts on pollution say, even though

the car has 30 times as much horsepower. Chain saws are worse: the California Air Resources Board says a chain saw operated for two hours emits as many hydrocarbons as a new car driven 3,000 miles.

That is, because modern cars have microprocessors that can precisely control an engine's mix of fuel and air; injectors to break the fuel into droplets of optimal size, and catalytic converters to catch anything that passes through the engine unburned.

Lawn mowers and other outdoor machines have none of these. In fact, they have all the pollution control equipment of a '57 Chevy — without a muffler.

Electronic Yard Work

Tomorrow, William K. Reilly, the administrator of the Environmental Protection Agency, and an organization of electric utilities plan to announce the start of a program to clean up America's lawn mowers. The effort on lawn mowers will be part of a plan that will eventually cover all kinds of engines, small and large, used off the highway. That would include construction equipment, farm tractors and even the service vehicles on airport aprons.

Ten utilities around the country will each give away 100 newly designed battery-powered mowers, taking their customers' old gasoline models in trade and asking them to test the new mowers in the field — or, more precise-

Continued on Page D5, Column 2

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Mower Is Target in War on Pollution

Continued From Page A1

ly, on the lawn — and report back on their performance. Meanwhile, the E.P.A. will haul the old mowers into its labs to study their emissions, in preparation for issuing new air-quality regulations similar to the rules now in place for cars and trucks.

In its new get-tough approach, the E.P.A. plans to make an example of the lawn mower. "We joke around and call it the last frontier for mobile sources," said Gay McGregor, an air-pollution specialist in the E.P.A.'s mobile-source laboratory in Ann Arbor, Mich.

The lawn-mower-engine industry, after initial resistance, is acknowledging the mighty little machine's role in air pollution. At the Outdoor Power Equipment Institute, formerly the Lawn Mower Institute, Dennis C. Dix, the executive director, conceded, "We certainly could do better." His industry, which never worried much about exhaust, is being forced by California to abide by new regulations that are to take effect in 1994 and 1999 and may be extended to other states as well.

Ann McClure, the executive vice president of the Professional Lawn Care Association of America, said: "There's an irony in this. Turf actually helps to cleanse the air, taking what emissions there are in the air, removing them, and replacing them with oxygen."

At Caterpillar Inc. in Peoria, Ill., a big maker of the type of agricultural and heavy construction equipment that is likely to be regulated soon, Rita L. Castle, said that the trend was "not unexpected." She added, "They've gone after most of the large emissions sources, and off-road vehicles certainly deserve a close look."

A Snow-Blower Exemption?

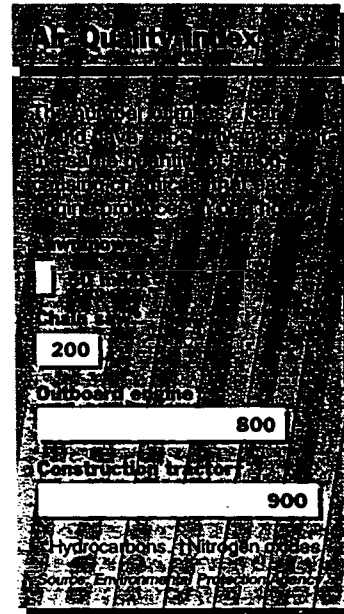
At the Toro Company, Karl C. Kaukis, the director of marketing for the Lawn Boy line, said lawn mowers could be cleaned up, but consumers would find them more costly. He added that he hoped for "a common sense approach."

Specifically, he said that he hoped that the cleanup would not extend to snow blowers, of which Toro is a major producer.

"The utilization is so low, and the summer utilization is zero," he said.

Smog is a summer hazard, though carbon monoxide, which small engines also emit, is a particular problem in some cities in winter.

Nobody is certain how many lawn mowers are in use or what their emis-



The New York Times

sion levels are after a few years without being tuned up, but an E.P.A. study late last year suggested that in areas that are already in violation of smog rules, nearly 20 percent of volatile organic compounds and nearly 30 percent of nitrogen oxides come from "nonroad sources." Mixed with sunlight, those two chemicals make smog.

The population of "nonroad sources" varies now from place to place; in the metropolitan New York area, for example, outboard motors on pleasure boats are numerous, but in Colorado they are not.

Most manufacturers will try to lower emissions from gasoline engines by redesigning the combustion chambers, in many cases switching to overhead valves instead of side valves, a change made by the auto industry 40 years ago. They also plan to make engines that run on a leaner fuel-air mixture.

California has adopted rules to begin in 1994 for improvements that the state says can be achieved with existing technology, and stricter rules for 1999 that will require new approaches.

Meeting the 1999 standards may mean installing catalytic converters. That development would not delight the makers and users of gasoline-powered mowers, because the super-hot converters could set fire to grass clippings. It should pose "an interesting packaging problem," said Thom-

as Bingham, a product engineer at the American Honda Motor Company.

The dirtiest of the outdoor machines are those that burn a mixture of gasoline and lubricating oil and run on a rich fuel-air ratio, like chain saws and weed eaters. Producing such engines is easier for the manufacturer, and their lack of fuel economy is not a concern; it is the rare customer who asks if the chain saw gets six trees to the gallon or seven.

Moreover, chain saws, mowers and the like have always escaped notice because they are outnumbered by cars. But collectively these and other outdoor engines are a big source of pollutants. The California Air Resources Board estimated that in its state, the annual hydrocarbon emissions of such devices equaled the output of 3.5 million 1991-model cars, each driving 16,000 miles.

One reason for the lawn-mower problem is that cars must, by law, be maintained and periodically inspected for their emission levels, but lawn mowers, typically, need not.

"What is tuning?" said A. Joseph Vandenberg, director of technical services at the Edison Electric Institute, in a reaction that pollution-control officials fear is typical of lawn-mower owners. Mr. Vandenberg is helping to organize the swap program.

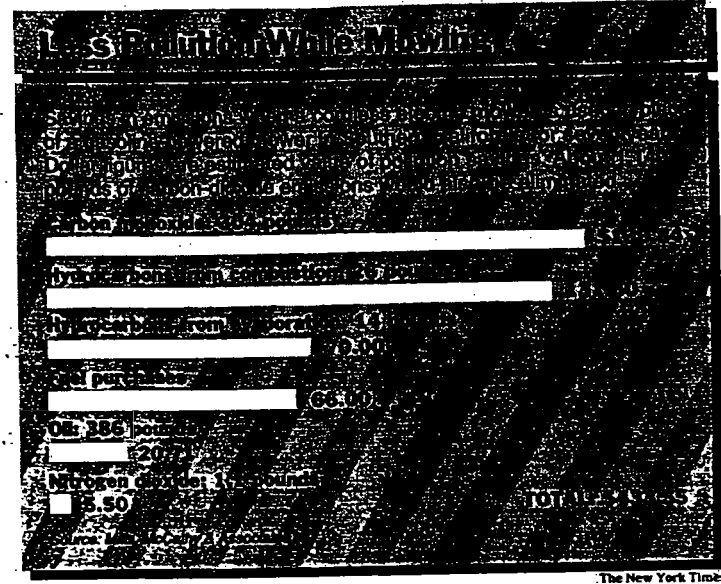
"I've got a spark plug I've left in it for 12 years," Mr. Vandenberg said. "As long as the thing cranks, you run it. If it doesn't, go out and buy a new one."

Cruising Range: a Quarter-Acre

One result of the new focus on lawn mowers is that before the much-ballyhooed zero-pollution electric car makes it into the typical suburban garage, the rechargeable electric mower may arrive there first.

The new electric mowers being distributed in the test program, made by Black & Decker, will be able to mow about a quarter of an acre without recharging. A full charge takes 20 hours; an 80 percent charge 4 hours. The mower, which will sell for about \$500, will use about 6 cents' worth of electricity per charge. Producing that electricity will result in some air pollution, but studies show that power plant smokestacks are cleaner than auto tailpipes, per unit of energy, and far, far cleaner than lawn mower exhaust. Disposing of dead batteries also poses a pollution problem, but, again, a lesser one.

This is not the debut of a new concept in mowing. Mr. Kaukis said Lawn Boy sold battery-powered mowers a decade ago, but found consumer interest very low. The company still sells plug-in mowers that require a heavy-duty, and very long,



The New York Times

extension cord.

The electric mowers to be distributed to consumers for testing are being provided by the Arizona Power System, Baltimore Gas and Electric, Boston Edison, Indianapolis Power and Light, the New England Electric System, New York State Electric and Gas, Oklahoma Gas and Electric, Potomac Electric Power, Southern California Edison and Tampa Electric.

The utilities are still deciding how to choose who will receive the new mowers, though they will be seeking a representative cross section of old mowers. The consumers chosen for the test group will get to keep the electric mowers, in exchange for donating their gas-powered machines to science.

Switching to electric mowers would eliminate several other categories of pollution, advocates say. For example, the E.P.A. estimates that about 7.5 percent of the contribution to hy-

drocarbon emissions of lawn and garden equipment comes from spilling gasoline while refueling.

Mark P. Mills, an energy consultant, estimates that the United States has 18 million walk-behind lawn mowers, and that if all of them were converted to electricity, oil consumption would fall 2.2 million barrels a year. Consumption of coal and natural gas to run power plants would rise, somewhat, but total energy use would still decline because the electric system is more efficient than a small internal-combustion engine, he said.

Converting all of this equipment is doubtful, however, since, for one thing, not all lawns are less than a quarter-acre, and not everyone will want to prolong the job of mowing the lawn by stopping to recharge the mower. Others, on the other hand, may seize the opportunity for such a respite.

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