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CAA [Clean Air Act] - General [1]

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THE WHITE HOUSE
Office of the Press Secretary

For Immediate Release

October 22, 1990

TO THE CONGRESS OF THE UNITED STATES:

I am pleased to submit my first annual report on the state of small business, which documents the progress of small firms in 1989. Over the record-breaking past almost 8 years of economic expansion, the economic environment for small business growth has been remarkable. Entrepreneurs have seized the opportunity to create millions of new enterprises, innovative products, and jobs.

In 1989, the number of business tax returns filed in the United States topped 20 million -- an increase of more than 50 percent over a decade ago. Most of these businesses are very small ventures, but their importance cannot be overstated: by testing thousands of new ideas, products, and processes in the marketplace, they are inventing America's future.

Small firms have had good earnings growth over the years of the expansion, and they continue to generate income for an increasing number of America's workers and entrepreneurs. Our economy experienced unemployment rates of only 5.3 percent in 1989, its lowest level since 1973. Small firms created a more than proportional share of new jobs relative to large businesses, as they have throughout the decade. Even when the pace of economic activity slowed, small firms often cushioned adverse effects on the labor force, laying off workers only as a last resort.

More women became small business owners during the 1980s than at any other time in America's history; the number of women proprietors almost doubled from 2.5 million in 1980 to 4.4 million in 1987. Minorities, too, started businesses in growing numbers during the 1980s. Women and minorities can be expected to continue making great strides in business ownership over the coming decade.

Small firms grew rapidly in the 1980s and contributed immeasurably to the diversity of the American economy. It was not easy. New companies often must struggle to enter competitive new markets with limited resources, vie with more established businesses for a trained labor force, and face increasing international competition.

While the 1980s were a decade of great achievement for America's entrepreneurial small businesses, the 1990s promise great opportunity and great challenge. We must invest in America -- in human, intellectual, and physical capital. We must continue to find the means to educate and empower young people, new immigrants, women, minorities, and all who aspire to be entrepreneurs.

In a time of great economic opportunity around the world, we must equip ourselves, not only to meet new international competition, but to take the lead in a global economy. I am confident that, with the strength and spirit of American enterprise, we will be able to build an even stronger economy in the last decade of the 20th century.

GEORGE BUSH

THE WHITE HOUSE,
October 22, 1990.

#

Assist Ad. mdy at
8:00 tomorrow a.m.

1. Onboard 95 mandatory — 10 million \$/car
2. Evaporation Control — discretion as to \$68 m by 2005
what level
3. onboard diagnostic — minimum technical none
criteria
4. Useful life — no discretion (except for trucks)
~~some dis model class~~
5. Recall Program — some discretion. But a lot of
public pressure. New. Petty ~~and~~ would
be diff.
- new 6. CFC recycling — discretion
- new 7. nonessential CFC ban — some discretion (a few
statutory prohibitions)
- \$200 m for
new program 8. Accidental Release list — statutory deadline.
much discretion
9. Visibility — nothing new except a study
- \$50 m 10. main vessel — much (RACT) discretion
- \$1.2 billion 11. (CTG — much (RACT) discretion
only app) in nonattainment areas
12. CEMs under Title IV.
No cost estimate
completely discretionary
statute says need not require
them if another way
available

Tier II Tailpipe standards —

Broad Discretion.

currently assuming we will not adopt

Howard

1) CO cell start

2) VOC reductions - \$2000/ 2

ton

3) CFC phaseout - early

1. Netting.

Issue: Netting increases in emissions against decreases in emissions within plants is an important tool used by companies to avoid triggering new source review. Netting is particularly important given the draconian technology and offset requirements the new bill imposes on sources that are subject to the new source review process in nonattainment areas. There is uncertainty as to how the bill affects netting.

Action: EPA should commit that all uncertainty will be resolved in a fashion that allows maximum opportunity for netting.

2. WEPCO.

Issue: Under current regulations, existing utility plants are subjected to new source review whenever a major modification occurs. Modifications that may trigger new source review include the installation of pollution control equipment or repairs to allow for more intensive use of cleaner plants to meet acid rain program requirements. This problem also occurs outside the utility sector. This is called the "WEPCO" problem.

Action: EPA's present draft rule on WEPCO, which was drafted before an Administration position on WEPCO was reached, should be scrapped. Instead, EPA should adopt, within the bounds of its discretionary authority, the Administration position on WEPCO as by enunciated the legislative proposal and supporting material given to the Senate Committee on Energy and Natural Resources. The specifics of how far EPA can go administratively are spelled out in this material. As time is of the essence, EPA will act within 120 days to produce a rule relevant to all Titles of the Act.

3. Oxygenated Fuels.

Issue: EPA must act on waivers from the 1992 oxygenated fuels program within 6 months of enactment. Availability of oxygenate is the test for granting waivers.

Action: In considering availability, EPA will not assume that oxygenate can be "backed out" of existing markets in which its use is subsidized through state tax programs. The focus of availability determinations will be free supply and excess capacity presently available. DOE, CEA and OMB will participate in the analysis of availability.

4. EPA Guidance for BACT determinations.

Issue: EPA, without prior consultation within the Administration, has issued very stringent guidelines to the regions regarding the determination of BACT (best available control technology) -- the level of technology required in the new source review process. NSPS standards issued by EPA are the "floor" for BACT, and many states have simply applied them. Now, EPA is requiring reviews to begin from the most stringent possible controls demonstrated anywhere, and to work down the list towards NSPS only if specific objections to these "Cadillac" controls (such as threat to economic viability) can be proven. The new legislation will subject many more sources to the new source review process, raising the cost of this policy change.

Action: EPA BACT guidelines will be reexamined and made more sensible. No explicit ordering of BACT analysis that goes beyond the statutory language should be mandated.

5. Air Toxics Residual Risk.

Issue: Evidently the provision that passed has a bright line (It is a House-Senate hybrid.) However, the bill, like current law, allows for consideration of actual exposure factors in making residual risk determinations.

Action: EPA will commit to interpreting and applying the bright-line standard and making other residual risk determinations using data on the actual exposure of real people, rather than the hypothetical exposure of theoretical people. EPA will also commit to invest significant resources in the development of methodology to allow for the expanded future use of actual exposure in its residual risk rulemakings. (This is a cultural matter to an important extent: EPA staff must be moved from a risk minimization approach to consider their task to be realistic risk assessment.)

6. Acid Rain.

Issue: The success of the sulfur dioxide program will depend importantly on the economic rationality of EPA's rulemaking and administrative actions.

Action: EPA should draw regularly and extensively on the expertise of the economic agencies, particularly CEA in this process.

7. Permitting.

Issue: There is some flexibility regarding the coverage of permitting requirements. We want to be sure that EPA phases in permit requirements gradually to minimize source-specific delays and uncertainties.

Action: EPA will commit to a gradual phase-in of the permit programs.

8. Mobile Source Air Toxics.

Issue: EPA must study toxic emissions from motor fuel (e.g., benzene) and then issue and promulgate regulations. There are already substantial reductions required as a part of the reformulated gasoline program that is mandatory in nine major cities.

Action: EPA will account for the favorable air toxics effects of ongoing efforts, such as RVP reduction and reformulated gasoline, as a part of its evaluation of the need for further action. EPA will focus its analysis on health impacts and base its assessment of these impacts on actual exposure information.

9. Utility MACT Studies (air toxics).

Issue: The bill includes two air toxics utility studies: one covering all toxics and one limited to mercury. These studies are due 3 and 4 years after enactment. Control technologies would likely be very expensive (exceeding cost of entire acid rain program), and could involve widespread scrubbing. Because of the nature of utility emissions (hot high plumes) a study of actual impacts and real effects is unlikely to show significant health effects.

Action: EPA will commit to conduct its health analyses on a real effects, actual exposure basis. It will also agree that any decision to regulate must be motivated by health considerations.

10. Air Toxics Permitting.

Issue: All sources must be permitted within 5 years of enactment, while MACT control requirements are on a longer time schedule. There is some concern that the implementation of MACT controls could be used as a pretext for reopening permits. If so, sources would be subject to "multiple jeopardy" and excessive administrative burdens.

Action: EPA will clarify permits will not be reopened when sources are forced to modify their facilities to comply with MACT requirements.

11. Certifying Reformulated Fuels.

Issue: There is uncertainty as to whether EPA will act within 180 days to certify reformulated fuels. Failure to act would subject companies to uncertainty regarding major investment plans that must be implemented quickly to meet the fuel mandates in the bill.

Action: EPA commitment to certify all fuels within 180 days of application.

12. Expedited Permitting for Refinery Projects.

Issue: The fuels provisions of the bill will require substantial changes at refineries throughout the country. Permitting must be expedited if the ambitious schedule for reformulated and oxygenated fuels outlined in the bills is to be met.

Action: Take all steps possible at the federal level to expedite refinery permitting.

13. Onboard Controls for Refueling Emissions.

Issue: These controls were opposed by the Administration for safety reasons. The bill requires the EPA Administrator to consult on safety matters with DOT.

Action: EPA will agree that a favorable safety determination by DOT is a prerequisite to any regulatory action requiring installation of onboard controls.

14. Regulation of NOx in Ozone Nonattainment Areas.

Issue: The contribution of NOx emissions to Ozone nonattainment problems varies across individual areas. In some cases, controlling NOx can increase local ozone concentrations.

Action: Regulators, not sources, should be required to demonstrate that NOx controls are necessary to reach attainment under local conditions before controls are required.

15. Criminal Enforcement Provisions.

Issue: There is concern that the discovery of violations through internal audits or small paperwork problems might trigger criminal sanctions under the bill. Such possibilities could have a chilling effect on managers and unnecessarily increase administrative burdens.

Action: EPA will go on the record with a policy regarding the treatments of information voluntarily supplied by parties and a definition of de minimus violations that will not trigger criminal sanctions.

Summary list
(Final version)

1. Netting/New Source Review -- Where there is legislative discretion, EPA will allow sources to use netting to the maximum extent possible, in accordance with the President's original proposal.
2. WEPCO/General Modification Rules -- EPA will revise the Agency's draft interpretative rule on WEPCO within 4 months to conform to the Administration's recent legislative proposal. EPA will extend the principles of this interpretative rule to modifications resulting from control requirements in other titles of the bill.
3. Permit Program Implementation and Regulatory Budget -- EPA will implement the permit program in the following ways: (1) use the discretion in the bill to phase-in the permit program, starting with major sources; (2) use the individual permit veto in rare situations and rely primarily on its review of the State permit program; and (3) ensure that modifications to install pollution controls do not in of themselves trigger the issuance of a new permit.

In addition, EPA will establish a regulatory budget for continuous emission monitoring and for other regulatory requirements where the statute grants EPA broad discretion and the cost to industry varies significantly.
4. NOx Control in Nonattainment Areas -- EPA will not require NOx controls in nonattainment areas unless the Agency has evidence that these controls will be necessary to achieve ozone attainment.
5. Realistic Assumptions for Estimating Risk -- EPA will begin now to build in more realistic assumptions into its risk models, including more accurate exposure modeling and maximum use of actual data. When establishing regulations to implement the residual risk provisions, EPA will allow individual sources of a source category to show that the source is not posing a risk warranting regulation. These assumptions should be used in regulatory decisions on MACT for utility emissions and mobile source toxic controls.
6. Top Down BACT Policy Revision -- EPA will modify its current guidelines on Top Down Bact to eliminate the presumption of defining BACT as the most stringent technology unless the source shows it is economically infeasible. This issue is raised by the expanded applicability of New Source Review provisions in the clean air bill.

7. Utility MACT Decision -- EPA will base its utility MACT decision for particulates and mercury on the health risk posed by these pollutants, not potential environmental effects.

8. Mobile Source Air Toxics Controls -- EPA will ensure coordination of increased air toxics controls with the existing regulatory requirements on autos and fuels, and will again base the decision on health risks.

9. Enforcement Discretion -- EPA and DOJ will develop an enforcement policy for company internal audits that will encourage companies to conduct internal compliance audits without fear of enforcement against violations. EPA and DOJ will also establish a policy that exempts de minimus violations from criminal sanctions.

10. Maximum Use of Subcategorization -- EPA will subcategorize sources for MACT determinations on the basis of technology, process differences, emissions potential, and exposure potential.

11. Onboard Safety Determination -- EPA will not issue onboard control requirements until the Secretary of Transportation has determined that onboard controls are safe.

12. Certifying Reformulated Fuels -- EPA will act within 180 days, as required by the statute, to certify reformulated fuels. Failure to do so would subject companies to uncertainty regarding major investment plans.

13. Expedited Permitting of Refineries -- EPA will expedite permitting for refineries to meet the ambitious schedules for reformulated and oxygenated fuels in the statute.

14. EPA Policy Office Review -- EPA will ensure that the policy office within the Agency has reviewed all major regulations and guidelines before submitting them to OMB.

15. Oxygenated Fuel Waivers -- EPA will act promptly on waiver requests. In considering availability, EPA will not assume that oxygenate can be backed out of existing markets in which its use is currently subsidized by State programs.

16. Allowance Trading Program -- EPA will consult with economic agencies, particularly CEA and Treasury, before issuing guidelines or regulations on the allowance trading program.

STUDIES AND REPORTS IN THE CLEAN AIR ACT OF 1990: A COMPILATION

Prepared by:

**CONSAD Research Corporation
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**Contact: Wilbur A. Steger, Ph.D.
(412) 363-5500**

April 1991

CONSAD Research Corporation

STUDIES AND REPORTS IN THE CLEAN AIR ACT OF 1990: A COMPILATION

Prepared by:

**CONSAD Research Corporation
121 North Highland Avenue
Pittsburgh, Pennsylvania 15206**

**Contact: Wilbur A. Steger, Ph.D.
(412) 363-5500**

April 1991

PREFACE AND PURPOSE

The purpose of this compilation of Clean Air Act of 1990 (P.L. 101-549) mandated studies and research reports is to begin to engage the public and interested private sector in a discussion of how to make the resulting information more useful, credible, and effective. Clearly, private and non-Federal parties -- think tanks, public interest groups, industry, labor, state and local governments, and others -- have a significant interest in the outcomes of these efforts.

What we have been learning from the NAPAP experience; the 1990 Cost of Clean report; Administrator Reilly's emphasis on an environmental "report card"; and the sheer number of studies and reports called for in the Clean Air Act of 1990: these signify a firm commitment to "getting smarter" from our accumulating environmental experience. Perhaps we might learn from the CAA/1990 experience, as it unfolds, better ways to target resources for risk reduction -- and, even, cost-effective approaches toward more integrated environmental management.

The public agencies involved will likely coordinate their efforts as is needed to meet their objectives. What can be gained by early discussions involving public and private parties is a more articulated expression of each party's information needs and interests, as well as an increased receptivity on the part of the private sector to cooperatively engage in the process in some way.

A few pointers about this document:

1. The studies and reports selected for inclusion are not a total set. Studies we believed to be relatively

unimportant from a more "macro" policy analysis viewpoint were excluded. If there is any single emphasis, it is on evaluation and assessment (both economic and technological). We would like to update this publication from time to time -- perhaps, to report on status or to reflect a new set of interests: please let us know if there is an omitted study/report that should be included!

2. The referencing system refers to the new Act and, by using both the new Title and the indicated section, subparts, and page number of the (P.L. 101-549) bill, we hope we have facilitated the search process. (This publication was assembled through the use of a CAA electronic database.)

Some of us (in the policy analysis field) believe that the "evaluation clock" is already ticking, that important data may be "getting away," and that the emphasis on CAA implementation has been restricted -- unfortunately -- primarily to rule-making and its near-in calendar requirements. In addition, matters of common and compatible data bases (both new and existing), useful for several of the studies, need to be considered shortly if not already initiated.

We have compiled only one summary table: Table 1 is a list of the called-for research or study, the Title of the Act in which it appears, the page number(s) of the Public Law 101-549 at which it can be located, the due date, the (stated) presence of economic content, and whether more than one agency is to be involved.

Perhaps meetings like this can help to begin to energize the "studies and reports" process. If this is a useful notion, let me know: we can come together again, in several months, if the desire is there.

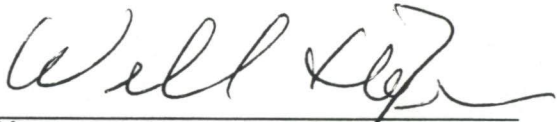

Wilbur A. Steger, Ph.D.

Table 1 : Summary of Studies and Research Found in Public Law 101-549, 101st Congress, November 15, 1990 Amendments to the Clean Air Act

<u>Studies and Research:</u>	<u>Title</u>	<u>Page Number(s)</u>	<u>Due Date</u>	<u>Economic Content</u>	<u>Interagency Report</u>
Study of VOC into the ambient air	I	2445	3 years after enactment	Yes	No
Study of ozone air quality	I	2448	3 years after enactment	No	No
Study on identifying control measures	I	2449	3 years after enactment	No	No
Study on the role of ozone precursors	I	2452	1 year after enactment	No	Yes
Report that reviews and analyzes existing State and local programs	I	2471	January 1, 1993 and every 3 years	Yes	Yes
Study on rebuilding heavy-duty engines	II	2472-2473	n.a.	Yes	No
Study on emission reductions: light-duty vehicles and trucks	II	2476-2477	June 1, 1997	Yes	Yes
Study assessing need for further reductions in emissions	II	2479-2480	June 1, 1997	Yes	No
Study on controlling unregulated emissions of toxic air pollutants	II	2481	18 months after enactment	Yes	No
Study of emissions from nonroad engines and vehicles	II	2500	1 year after enactment	No	No
Report on effectiveness of California Pilot Program	II	2527	June 30, 1994 and June 30, 1998	Yes	No
Report on alternatives to diesel fuel	II	2529	1 year after enactment	No	No
Study on testing of uninstalled aircraft engines	II	2529-2530	2 years after enactment	Yes	Yes

Table 1 : Summary of Studies and Research Found in Public Law 101-549, 101st Congress, November 15, 1990
Amendments to the Clean Air Act (Continued)

Studies and Research:	Title	Page Number(s)	Due Date	Economic Content	Interagency Report
A report on risks to public health	III	2543	6 years after enactment	Yes	No
Examine methods for controlling emissions	III	2554	n.a.	Yes	No
Establish program to identify and assess atmospheric deposition	III	2556-2558	3 years after enactment and biennially thereafter	No	Yes
Study on emissions from electric utility steam generating units	III	2558-2559	3 years after enactment	Yes	Yes
Study to assess coke oven production emission control technologies	III	2559	6 year study beginning 1992	Yes	Yes
Study on hazards of hydrofluoric acid	III	2560	2 years after enactment	No	No
Review of risk assessment methodology employed by the EPA	III	2560-2561	30 months after enactment	Yes	Yes
Research and studies on the potential for accidental releases	III	2566 & 2570	n.a.	No	Yes
Investigation of the policy implications and appropriate uses of risk assessment and risk management in regulatory programs.	III	2574-2575	18 months after enactment	No	Yes
Study evaluating environmental and economic consequences	IV	2591	January 1, 1994	Yes	No
Report on the feasibility and effectiveness of an acid deposition standard	IV	2632	36 months after enactment	No	Yes
Report which will analyze clean coal technologies export programs	IV	2634	1 year after enactment	No	Yes
Study on the effectiveness of various buffering and neutralizing agents	IV	2634	n.a.	No	Yes

Table 1 : Summary of Studies and Research Found in Public Law 101-549, 101st Congress, November 15, 1990
Amendments to the Clean Air Act (Continued)

Studies and Research:	Title	Page Number(s)	Due Date	Economic Content	Interagency Report
Report that identifies activities, substances, processes that could reduce methane emissions	VI	2670-2671	2 years after enactment	Yes	No
Study which calculates net environmental benefits of renewable energy	VIII	2690	18 months after enactment	Yes	Yes
Study on causes of degraded visibility in southwestern New Mexico	VIII	2690	n.a.	No	No
Report identifying and evaluating economic effects	VIII	2690-2691	9 mos.interim report and final 18 mos. after enact.	Yes	No
Comprehensive analysis of the impact of this Act	VIII	2691-2693	12 months after enactment	Yes	Yes
Study and report evaluating the health and environmental impacts	VIII	2693	2 years after enactment	Yes	Yes
Establish program to monitor and improve air quality along Mexican border	VIII	2693-2694	n.a.	Yes	Yes
Identify and evaluate sources and source regions of visibility impairment	VIII	2695	Interim findings 3 years after enactment	No	Yes
Assess the scientific and technical data, studies	VIII	2696-2697	4 years after enactment	No	No
Report on the role of national secondary ambient air quality standards	VIII	2697	3 years after enactment	Yes	Yes

Table 1 : Summary of Studies and Research Found in Public Law 101-549, 101st Congress, November 15, 1990
Amendments to the Clean Air Act (Continued)

Studies and Research:	Title	Page Number(s)	Due Date	Economic Content	Interagency Report
Analysis of the health and environmental aspects of magnetic levitation	VIII	2699	6 months after enactment	No	Yes
	IX	2700	Periodic reports not less than every 5 years	No	No
Research on short- and long-term effects of air pollutants	IX	2700-2701	12 months after enactment	No	Yes
Research on short- and long-term effects, and trends of ecosystems	IX	2702	n.a.	Yes	Yes
Experimental and analytical research on those chemicals which pose greatest risk of accidental release	IX	2702-2703	n.a.	No	Yes
Basic engineering research and technology program	IX	2703-2704	n.a.	No	No
Research on quantifying risks to human health	IX	2704	n.a.	No	Yes
Develop a plan to join Federal ecological and air pollution research efforts	IX	2704	2 years after enactment and every 4 years thereafter	No	Yes
Predict air emissions from alternative fuels	IX	2706	n.a.	No	No
Study comparing international air pollution control technologies	IX	2706	2 years after enactment	No	No
Identify and assess the effects on employment attributable to the Act	XI	2712	4th anniversary of enactment	Yes	No

TITLE I - PROVISIONS FOR ATTAINMENT AND MAINTENANCE OF NATIONAL
AMBIENT AIR QUALITY STANDARDS

Chapter 1.0: TITLE I

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TITLE I - PROVISIONS FOR ATTAINMENT AND MAINTENANCE OF NATIONAL
AMBIENT AIR QUALITY STANDARDS

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SEC. 103	ADDITIONAL PROVISIONS FOR OZONE NONATTAINMENT AREAS

Part D of title I of the Clean Air Act is amended by adding the following new subpart at the end thereof:

Subpart 2 Additional Provisions for Ozone Nonattainment Areas

"Sec.181	Classifications and attainment dates
"Sec.182	Plan submissions and requirements
"Sec.183	Federal ozone measures
"Sec.184	Control of interstate ozone air pollution
"Sec.185	Enforcement for severe and extreme ozone nonattainment areas for failure to attain
"Sec.185A	Transitional areas
"Sec.185B	NOx and VOC study

TITLE I - PROVISIONS FOR ATTAINMENT AND MAINTENANCE OF NATIONAL
AMBIENT AIR QUALITY STANDARDS

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``SEC. 183. FEDERAL OZONE MEASURES

``(e) Control of Emissions From Certain Sources

``(2) Study and report

``(A) Study. The Administrator shall conduct a study of the emissions of volatile organic compounds into the ambient air from consumer and commercial products (or any combination thereof) in order to

``(i) determine their potential to contribute to ozone levels which violate the national ambient air quality standard for ozone; and

``(ii) establish criteria for regulating consumer and commercial products or classes or categories thereof which shall be subject to control under this subsection.

The study shall be completed and a report submitted to Congress not later than 3 years after the date of the enactment of the Clean Air Act Amendments of 1990.

``(B) Consideration of certain factors. In establishing the criteria under subparagraph (A)(ii), the Administrator shall take into consideration each of the following:

``(i) The uses, benefits, and commercial demand of consumer and commercial products.

``(ii) The health or safety functions (if any) served by such consumer and commercial products.

``(iii) Those consumer and commercial products which emit highly reactive volatile organic compounds into the ambient air.

``(iv) Those consumer and commercial products which are subject to the most cost-effective controls.

``(v) The availability of alternatives (if any) to such consumer and commercial products which are of comparable costs, considering health, safety, and environmental impacts.

* Found in Public Law 101-549, 101st Congress, Nov. 15, 1990.

TITLE I - PROVISIONS FOR ATTAINMENT AND MAINTENANCE OF NATIONAL
AMBIENT AIR QUALITY STANDARDS

Located on page 2448

``SEC. 183. FEDERAL OZONE MEASURES.

- ``(g) Ozone Design Value Study. The Administrator shall conduct a study of whether the methodology in use by the Environmental Protection Agency as of the date of the enactment of the Clean Air Act Amendments of 1990 for establishing a design value for ozone provides a reasonable indicator of the ozone air quality of ozone nonattainment areas. The Administrator shall obtain input from States, local subdivisions thereof, and others. The study shall be completed and a report submitted to Congress not later than 3 years after the date of the enactment of the Clean Air Act Amendments of 1990. The results of the study shall be subject to peer and public review before submitting it to Congress.

TITLE I - PROVISIONS FOR ATTAINMENT AND MAINTENANCE OF NATIONAL
AMBIENT AIR QUALITY STANDARDS

Located on page 2449

``SEC. 184. CONTROL OF INTERSTATE OZONE AIR POLLUTION.

``(b) Plan Provisions for States in Ozone Transport Regions.

- ``(2) Within 3 years after the date of the enactment of the Clean Air Act Amendments of 1990, the Administrator shall complete a study identifying control measures capable of achieving emission reductions comparable to those achievable through vehicle refueling controls contained in section 182(b)(3), and such measures or such vehicle refueling controls shall be implemented in accordance with the provisions of this section. Notwithstanding other deadlines in this section, the applicable implementation plan shall be revised to reflect such measures within 1 year of completion of the study. For purposes of this section any stationary source that emits or has the potential to emit at least 50 tons per year of volatile organic compounds shall be considered a major stationary source and subject to the requirements which would be applicable to major stationary sources if the area were classified as a Moderate nonattainment area.

Located on page 2452

``The Administrator, in conjunction with the National Academy of Sciences, shall conduct a study on the role of ozone precursors in tropospheric ozone formation and control. The study shall examine the roles of NOx and VOC emission reductions, the extent to which NOx reductions may contribute (or be counterproductive) to achievement of attainment in different nonattainment areas, the sensitivity of ozone to the control of NOx, the availability and extent of controls for NOx, the role of biogenic VOC emissions, and the basic information required for air quality models. The study shall be completed and a proposed report made public for 30 days comment within 1 year of the date of the enactment of the Clean Air Act Amendments of 1990, and a final report shall be submitted to Congress within 15 months after such date of enactment. The Administrator shall utilize all available information and studies, as well as develop additional information, in conducting the study required by this section.''.
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TITLE I - PROVISIONS FOR ATTAINMENT AND MAINTENANCE OF NATIONAL
AMBIENT AIR QUALITY STANDARDS

Located on page 2471

Sec. 111. Transportation system impacts on clean air.

Section 108(f) of the Clean Air Act is amended by adding at the end thereof the following new paragraphs:

- “(3) The Secretary of Transportation and the Administrator shall submit to Congress by January 1, 1993, and every 3 years thereafter a report that
- “(A) reviews and analyzes existing State and local air quality-related transportation programs, including specifically any analyses of whether adequate funding is available to complete transportation projects identified in State implementation plans in the time required by applicable State implementation plans and any Federal efforts to promote those programs;
- “(B) evaluates the extent to which the Department of Transportation's existing air quality-related transportation programs and such Department's proposed budget will achieve the goals of and compliance with this Act; and
- “(C) recommends what, if any, changes to such existing programs and proposed budget as well as any statutory authority relating to air quality-related transportation programs that would improve the achievement of the goals of and compliance with the Clean Air Act.
- “(4) In each report to Congress after the first report required under paragraph (3), the Secretary of Transportation shall include a description of the actions taken to implement the changes recommended in the preceding report.

TITLE II - PROVISIONS RELATING TO MOBILE SOURCES

Chapter 2.0: TITLE II

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Located on pages 2472 - 2473.

SEC. 201. HEAVY-DUTY TRUCKS.

Section 202(a)(3) of the Clean Air Act (42 U.S.C. 7521(a)(3)) is amended as follows:

- (1) Strike subparagraphs (A), (B), (C), (D), and (E) and insert the following:

``(D) Rebuilding practices. The Administrator shall study the practice of rebuilding heavy-duty engines and the impact rebuilding has on engine emissions. On the basis of that study and other information available to the Administrator, the Administrator may prescribe requirements to control rebuilding practices, including standards applicable to emissions from any rebuilt heavy-duty engines (whether or not the engine is past its statutory useful life), which in the Administrator's judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare taking costs into account. Any regulation shall take effect after a period the Administrator finds necessary to permit the development and application of the requisite control measures, giving appropriate consideration to the cost of compliance within the period and energy and safety factors.''.``

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Located on pages 2476-2477

SEC. 203. EMISSION STANDARDS FOR CONVENTIONAL MOTOR VEHICLES.

“(i) Phase II Study for Certain Light-Duty Vehicles and Light-Duty Trucks.

“(1) The Administrator, with the participation of the Office of Technology Assessment, shall study whether or not further reductions in emissions from light-duty vehicles and light-duty trucks should be required pursuant to this title. The study shall consider whether to establish with respect to model years commencing after January 1, 2003, the standards and useful life period for gasoline and diesel-fueled light-duty vehicles and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 lbs. or less specified in the following table:

“table 3 - See Table

Such study shall also consider other standards and useful life periods which are more stringent or less stringent than those set forth in table 3 (but more stringent than those referred to in subsections (g) and (h)).

“(2)(A) As part of the study under paragraph (1), the Administrator shall examine the need for further reductions in emissions in order to attain or maintain the national ambient air quality standards, taking into consideration the waiver provisions of section 209(b). As part of such study, the Administrator shall also examine

“(i) the availability of technology (including the costs thereof), in the case of light-duty vehicles and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 lbs. or less, for meeting more stringent emission standards than those provided in subsections (g) and (h) for model years commencing not earlier than after January 1, 2003, and not later than model year 2006, including the lead time and safety and energy impacts of meeting more stringent emission standards; and

“(ii) the need for, and cost effectiveness of, obtaining further reductions in emissions from such light-duty vehicles and light-duty trucks, taking into consideration alternative means of attaining or maintaining the national primary ambient air quality standards pursuant to State implementation plans and other requirements of this Act, including their feasibility and cost effectiveness.

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- “(B) The Administrator shall submit a report to Congress no later than June 1, 1997, containing the results of the study under this subsection, including the results of the examination conducted under subparagraph (A). Before submittal of such report the Administrator shall provide a reasonable opportunity for public comment and shall include a summary of such comments in the report to Congress.
- “(3)(A) Based on the study under paragraph (1) the Administrator shall determine, by rule, within 3 calendar years after the report is submitted to Congress, but not later than December 31, 1999, whether
 - “(i) there is a need for further reductions in emissions as provided in paragraph (2)(A);
 - “(ii) the technology for meeting more stringent emission standards will be available, as provided in paragraph (2)(A)(i), in the case of light-duty vehicles and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 lbs. or less, for model years commencing not earlier than January 1, 2003 and not later than model year 2006, considering the factors listed in paragraph (2)(A)(i); and
 - “(iii) obtaining further reductions in emissions from such vehicles will be needed and cost effective, taking into consideration alternatives as provided in paragraph (2)(A)(ii).

The rulemaking under this paragraph shall commence within 3 months after submission of the report to Congress under paragraph (2)(B).

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Located on pages 2479-2480

SEC. 204. CARBON MONOXIDE EMISSIONS AT COLD TEMPERATURES.

Section 202 of the Clean Air Act (42 U.S.C. 7521) is amended by adding the following new subsection after subsection (i):

- “(2) Phase ii.
- “(A) Not later than June 1, 1997, the Administrator shall complete a study assessing the need for further reductions in emissions of carbon monoxide and the maximum reductions in such emissions achievable from model year 2001 and later model year light-duty vehicles and light-duty trucks when operated at 20 degrees Fahrenheit.
- “(B)(i) If as of June 1, 1997, 6 or more nonattainment areas have a carbon monoxide design value of 9.5 ppm or greater, the regulations under subsection (a)(1) of this section applicable to emissions of carbon monoxide from model year 2002 and later model year light-duty vehicles and light-duty trucks shall contain standards which provide that emissions of carbon monoxide from such vehicles and trucks when operated at 20 degrees Fahrenheit may not exceed 3.4 grams per mile (gpm) in the case of light-duty vehicles and 4.4 grams per mile (gpm) in the case of light-duty trucks up to 6,000 GVWR and a level comparable in stringency in the case of light-duty trucks 6,000 GVWR and above.
- “(ii) In determining for purposes of this subparagraph whether 6 or more nonattainment areas have a carbon monoxide design value of 9.5 ppm or greater, the Administrator shall exclude the areas of Steubenville, Ohio, and Oshkosh, Wisconsin.

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Located on page 2481

SEC. 206. MOBILE SOURCE-RELATED AIR TOXICS.

Section 202 of the Clean Air Act (42 U.S.C. 7521) is amended by adding the following new subsection after subsection (k):

“(1) Mobile Source-Related Air Toxics.

“(1) Study. Not later than 18 months after the date of the enactment of the Clean Air Act Amendments of 1990, the Administrator shall complete a study of the need for, and feasibility of, controlling emissions of toxic air pollutants which are unregulated under this Act and associated with motor vehicles and motor vehicle fuels, and the need for, and feasibility of, controlling such emissions and the means and measures for such controls. The study shall focus on those categories of emissions that pose the greatest risk to human health or about which significant uncertainties remain, including emissions of benzene, formaldehyde, and 1, 3 butadiene. The proposed report shall be available for public review and comment and shall include a summary of all comments.

“(2) Standards. Within 54 months after the date of the enactment of the Clean Air Act Amendments of 1990, the Administrator shall, based on the study under paragraph (1), promulgate (and from time to time revise) regulations under subsection (a)(1) or section 211(c)(1) containing reasonable requirements to control hazardous air pollutants from motor vehicles and motor vehicle fuels. The regulations shall contain standards for such fuels or vehicles, or both, which the Administrator determines reflect the greatest degree of emission reduction achievable through the application of technology which will be available, taking into consideration the standards established under subsection (a), the availability and costs of the technology, and noise, energy, and safety factors, and lead time. Such regulations shall not be inconsistent with standards under section 202(a). The regulations shall, at a minimum, apply to emissions of benzene and formaldehyde.”.

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Located on page 2500

SEC. 222. NONROAD ENGINES AND VEHICLES.

- (a) Emission Standards. Section 213 of the Clean Air Act (42 U.S.C. 7547) is amended to read as follows:

``SEC. 213. NONROAD ENGINES AND VEHICLES.

``(a) Emissions Standards.

- ``(1) The Administrator shall conduct a study of emissions from nonroad engines and nonroad vehicles (other than locomotives or engines used in locomotives) to determine if such emissions cause, or significantly contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare. Such study shall be completed within 12 months of the date of the enactment of the Clean Air Act Amendments of 1990.

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Located on page 2527

SEC. 229. CLEAN-FUEL VEHICLES.

- (a) Amendment to Title II. Title II of the Clean Air Act is amended by adding the following new part after part B:

``PART C CLEAN FUEL VEHICLES

``SEC. 249. CALIFORNIA PILOT TEST PROGRAM.

``(e) Program Evaluation.

- ``(1) Not later than June 30, 1994 and again in connection with the report under paragraph (2), the Administrator shall provide a report to the Congress on the status of the California Air Resources Board Low-Emissions Vehicles and Clean Fuels Program. Such report shall examine the capability, from a technological standpoint, of motor vehicle manufacturers and motor vehicle fuel suppliers to comply with the requirements of such program and with the requirements of the California Pilot Program under this section.
- ``(2) Not later than June 30, 1998, the Administrator shall complete and submit a report to Congress on the effectiveness of the California pilot program under this section. The report shall evaluate the level of emission reductions achieved under the program, the costs of the program, the advantages and disadvantages of extending the program to other nonattainment areas, and desirability of continuing or expanding the program in California.
- ``(3) The program under this section cannot be extended or terminated by the Administrator except by Act of Congress enacted after the date of the Clean Air Act Amendments of 1990. Section 177 of this Act does not apply to the program under this section.

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Located on page 2529

SEC. 231. ETHANOL SUBSTITUTE FOR DIESEL.

Within one year after the enactment of the Clean Air Act Amendments of 1990, the Administrator shall contract with a laboratory which has done research on alcohol esters of rapeseed oil to evaluate the feasibility, engine performance, emissions, and production capability associated with an alternative to diesel fuel composed of ethanol and high erucic rapeseed oil. The Administrator shall submit a report on the results of this research to Congress within 3 years of the issuance of such contract.

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Located on pages 2529-2530

SEC. 233. STATES AUTHORITY TO REGULATE.

- (a) Study. The Administrator of the Environmental Protection Agency and the Secretary of Transportation, in consultation with the Secretary of Defense, shall commence a study and investigation of the testing of uninstalled aircraft engines in enclosed test cells that shall address at a minimum the following issues and such other issues as they shall deem appropriate
 - (1) whether technologies exist to control some or all emissions of oxides of nitrogen from test cells;
 - (2) the effectiveness of such technologies;
 - (3) the cost of implementing such technologies;
 - (4) whether such technologies affect the safety, design, structure, operation, or performance of aircraft engines;
 - (5) whether such technologies impair the effectiveness and accuracy of aircraft engine safety design, and performance tests conducted in test cells; and
 - (6) the impact of not controlling such oxides of nitrogen in the applicable nonattainment areas and on other sources, stationary and mobile, on oxides of nitrogen in such areas.
- (b) Report, Authority To Regulate. Not later than 24 months after enactment of the Clean Air Act Amendments of 1990, the Administrator of the Environmental Protection Agency and the Secretary of Transportation shall submit to Congress a report of the study conducted under this section. Following the completion of such study, any of the States may adopt or enforce any standard for emissions of oxides of nitrogen from test cells only after issuing a public notice stating whether such standards are in accordance with the findings of the study.

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Chapter 3.0: TITLE III

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Clean Air Act TITLE III SECTION 301. HAZARDOUS AIR POLLUTANTS.
Section 112 of the Clean Air Act is amended to read as follows:

``SEC. 112. HAZARDOUS AIR POLLUTANTS.

``(f) Standard To Protect Health and the Environment.

``(1) Report. Not later than 6 years after the date of enactment of the Clean Air Act Amendments of 1990 the Administrator shall investigate and report, after consultation with the Surgeon General and after opportunity for public comment, to Congress on

``(A) methods of calculating the risk to public health remaining, or likely to remain, from sources subject to regulation under this section after the application of standards under subsection (d);

``(B) the public health significance of such estimated remaining risk and the technologically and commercially available methods and costs of reducing such risks;

``(C) the actual health effects with respect to persons living in the vicinity of sources, any available epidemiological or other health studies, risks presented by background concentrations of hazardous air pollutants, any uncertainties in risk assessment methodology or other health assessment technique, and any negative health or environmental consequences to the community of efforts to reduce such risks; and

``(D) recommendations as to legislation regarding such remaining risk.

``(2) Emission standards.

``(A) If Congress does not act on any recommendation submitted under paragraph (1), the Administrator shall, within 8 years after promulgation of standards for each category or subcategory of sources pursuant to subsection (d), promulgate standards for such category or subcategory if promulgation of such standards is required in order to provide an ample margin of safety to protect public health in accordance with this section (as in effect before the date of enactment of the Clean Air

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Act Amendments of 1990) or to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect. Emission standards promulgated under this subsection shall provide an ample margin of safety to protect public health in accordance with this section (as in effect before the date of enactment of the Clean Air Act Amendments of 1990), unless the Administrator determines that a more stringent standard is necessary to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect. If standards promulgated pursuant to subsection (d) and applicable to a category or subcategory of sources emitting a pollutant (or pollutants) classified as a known, probable or possible human carcinogen do not reduce lifetime excess cancer risks to the individual most exposed to emissions from a source in the category or subcategory to less than one in one million, the Administrator shall promulgate standards under this subsection for such source category.

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Located on page 2554

SECTION 301. HAZARDOUS AIR POLLUTANTS.
Section 112. Hazardous air pollutants.

- ``(1) State Programs.
- ``(3) Technical assistance. The Administrator shall establish and maintain an air toxics clearinghouse and center to provide technical information and assistance to State and local agencies and, on a cost recovery basis, to others on control technology, health and ecological risk assessment, risk analysis, ambient monitoring and modeling, and emissions measurement and monitoring. The Administrator shall use the authority of section 103 to examine methods for preventing, measuring, and controlling emissions and evaluating associated health and ecological risks. Where appropriate, such activity shall be conducted with not-for-profit organizations. The Administrator may conduct research on methods for preventing, measuring and controlling emissions and evaluating associated health and environment risks. All information collected under this paragraph shall be available to the public.

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Located on pages 2556-2558

SECTION 301. HAZARDOUS AIR POLLUTANTS.

Section 112. Hazardous air pollutants.

- ``(m) Atmospheric Deposition to Great Lakes and Coastal Waters.
- ``(1) Deposition assessment. The Administrator, in cooperation with the Under Secretary of Commerce for Oceans and Atmosphere, shall conduct a program to identify and assess the extent of atmospheric deposition of hazardous air pollutants (and in the discretion of the Administrator, other air pollutants) to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters. As part of such program, the Administrator shall
 - ``(A) monitor the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters, including monitoring of the Great Lakes through the monitoring network established pursuant to paragraph (2) of this subsection and designing and deploying an atmospheric monitoring network for coastal waters pursuant to paragraph (4);
 - ``(B) investigate the sources and deposition rates of atmospheric deposition of air pollutants (and their atmospheric transformation precursors);
 - ``(C) conduct research to develop and improve monitoring methods and to determine the relative contribution of atmospheric pollutants to total pollution loadings to the Great Lakes, the Chesapeake Bay, Lake Champlain, and coastal waters;
 - ``(D) evaluate any adverse effects to public health or the environment caused by such deposition (including effects resulting from indirect exposure pathways) and assess the contribution of such deposition to violations of water quality standards established pursuant to the Federal Water Pollution Control Act and drinking water standards established pursuant to the Safe Drinking Water Act; and
 - ``(E) sample for such pollutants in biota, fish, and wildlife of the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters and characterize the sources of such pollutants.
- ``(2) Great lakes monitoring network. The Administrator shall oversee, in accordance with Annex 15 of the Great Lakes Water Quality Agreement, the establishment and operation of a Great Lakes atmospheric deposition network to monitor atmospheric deposition of hazardous air

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pollutants (and in the Administrator's discretion, other air pollutants) to the Great Lakes.

- “(A) As part of the network provided for in this paragraph, and not later than December 31, 1991, the Administrator shall establish in each of the 5 Great Lakes at least 1 facility capable of monitoring the atmospheric deposition of hazardous air pollutants in both dry and wet conditions.
- “(B) The Administrator shall use the data provided by the network to identify and track the movement of hazardous air pollutants through the Great Lakes, to determine the portion of water pollution loadings attributable to atmospheric deposition of such pollutants, and to support development of remedial action plans and other management plans as required by the Great Lakes Water Quality Agreement.
- “(C) The Administrator shall assure that the data collected by the Great Lakes atmospheric deposition monitoring network is in a format compatible with databases sponsored by the International Joint Commission, Canada, and the several States of the Great Lakes region.
- “(3) Monitoring for the Chesapeake Bay and Lake Champlain. The Administrator shall establish at the Chesapeake Bay and Lake Champlain atmospheric deposition stations to monitor deposition of hazardous air pollutants (and in the Administrator's discretion, other air pollutants) within the Chesapeake Bay and Lake Champlain watersheds. The Administrator shall determine the role of air deposition in the pollutant loadings of the Chesapeake Bay and Lake Champlain, investigate the sources of air pollutants deposited in the watersheds, evaluate the health and environmental effects of such pollutant loadings, and shall sample such pollutants in biota, fish and wildlife within the watersheds, as necessary to characterize such effects.
- “(4) Monitoring for coastal waters. The Administrator shall design and deploy atmospheric deposition monitoring networks for coastal waters and their watersheds and shall make any information collected through such networks available to the public. As part of this effort, the Administrator shall conduct research to develop and improve deposition monitoring methods, and to determine the relative contribution of atmospheric pollutants to pollutant loadings. For purposes of this subsection, 'coastal waters' shall mean estuaries selected pursuant to section 320(a)(2)(A) of the Federal Water Pollution Control Act or listed pursuant to section 320(a)(2)(B) of such Act or estuarine research reserves

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designated pursuant to section 315 of the Coastal Zone Management Act (16 U.S.C. 1461).

- ``(5) Report. Within 3 years of the date of enactment of the Clean Air Act Amendments of 1990 and biennially thereafter, the Administrator,, in cooperation with the Under Secretary of Commerce for Oceans and Atmosphere, shall submit to the Congress a report on the results of any monitoring, studies, and investigations conducted pursuant to this subsection. Such report shall include, at a minimum, an assessment of
 - ``(A) the contribution of atmospheric deposition to pollution loadings in the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters;
 - ``(B) the environmental and public health effects of any pollution which is attributable to atmospheric deposition to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters;
 - ``(C) the source or sources of any pollution to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters which is attributable to atmospheric deposition;
 - ``(D) whether pollution loadings in the Great Lakes, the Chesapeake Bay, Lake Champlain or coastal waters cause or contribute to exceedances of drinking water standards pursuant to the Safe Drinking Water Act or water quality standards pursuant to the Federal Water Pollution Control Act or, with respect to the Great Lakes, exceedances of the specific objectives of the Great Lakes Water Quality Agreement; and
 - ``(E) a description of any revisions of the requirements, standards, and limitations pursuant to this Act and other applicable Federal laws as are necessary to assure protection of human health and the environment.
- ``(6) Additional regulation. As part of the report to Congress, the Administrator shall determine whether the other provisions of this section are adequate to prevent serious adverse effects to public health and serious or widespread environmental effects, including such effects resulting from indirect exposure pathways, associated with atmospheric deposition to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters of hazardous air pollutants (and their atmospheric transformation products). The Administrator shall take into consideration the tendency of such pollutants to bioaccumulate. Within 5 years after the date of enactment of the Clean Air Act Amendments of 1990, the

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Administrator shall, based on such report and determination, promulgate, in accordance with this section, such further emission standards or control measures as may be necessary and appropriate to prevent such effects, including effects due to bioaccumulation and indirect exposure pathways. Any requirements promulgated pursuant to this paragraph with respect to coastal waters shall only apply to the coastal waters of the States which are subject to section 328(a).

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- ``(n) Other provisions.
- ``(1) Electric utility steam generating units.
- ``(A) The Administrator shall perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by electric utility steam generating units of pollutants listed under subsection (b) after imposition of the requirements of this Act. The Administrator shall report the results of this study to the Congress within 3 years after the date of the enactment of the Clean Air Act Amendments of 1990. The Administrator shall develop and describe in the Administrator's report to Congress alternative control strategies for emissions which may warrant regulation under this section. The Administrator shall regulate electric utility steam generating units under this section, if the Administrator finds such regulation is appropriate and necessary after considering the results of the study required by this subparagraph.
- ``(B) The Administrator shall conduct, and transmit to the Congress not later than 4 years after the date of enactment of the Clean Air Act Amendments of 1990, a study of mercury emissions from electric utility steam generating units, municipal waste combustion units, and other sources, including area sources. Such study shall consider the rate and mass of such emissions, the health and environmental effects of such emissions, technologies which are available to control such emissions, and the costs of such technologies.
- ``(C) The National Institute of Environmental Health Sciences shall conduct, and transmit to the Congress not later than 3 years after the date of enactment of the Clean Air Act Amendments of 1990, a study to determine the threshold level of mercury exposure below which adverse human health effects are not expected to occur. Such study shall include a threshold for mercury concentrations in the tissue of fish which may be consumed (including consumption by sensitive populations) without adverse effects to public health.

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- ``(n) Other provisions.
- ``(1) Electric utility steam generating units.
- ``(2) Coke oven production technology study.
- ``(A) The Secretary of the Department of Energy and the Administrator shall jointly undertake a 6-year study to assess coke oven production emission control technologies and to assist in the development and commercialization of technically practicable and economically viable control technologies which have the potential to significantly reduce emissions of hazardous air pollutants from coke oven production facilities. In identifying control technologies, the Secretary and the Administrator shall consider the range of existing coke oven operations and battery design and the availability of sources of materials for such coke ovens as well as alternatives to existing coke oven production design.
- ``(B) The Secretary and the Administrator are authorized to enter into agreements with persons who propose to develop, install and operate coke production emission control technologies which have the potential for significant emissions reductions of hazardous air pollutants provided that Federal funds shall not exceed 50 per centum of the cost of any project assisted pursuant to this paragraph.
- ``(C) The Secretary shall prepare annual reports to Congress on the status of the research program and at the completion of the study shall make recommendations to the Administrator identifying practicable and economically viable control technologies for coke oven production facilities to reduce residual risks remaining after implementation of the standard under subsection (d).
- ``(D) There are authorized to be appropriated \$5,000,000 for each of the fiscal years 1992 through 1997 to carry out the program authorized by this paragraph.

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- “(6) Hydrofluoric acid. Not later than 2 years after the date of enactment of the Clean Air Act Amendments of 1990, the Administrator shall, for those regions of the country which do not have comprehensive health and safety regulations with respect to hydrofluoric acid, complete a study of the potential hazards of hydrofluoric acid and the uses of hydrofluoric acid in industrial and commercial applications to public health and the environment considering a range of events including worst-case accidental releases and shall make recommendations to the Congress for the reduction of such hazards, if appropriate.

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- ``(o) National Academy of Sciences Study.
- ``(1) Request of the academy. Within 3 months of the date of enactment of the Clean Air Act Amendments of 1990, the Administrator shall enter into appropriate arrangements with the National Academy of Sciences to conduct a review of
 - ``(A) risk assessment methodology used by the Environmental Protection Agency to determine the carcinogenic risk associated with exposure to hazardous air pollutants from source categories and subcategories subject to the requirements of this section; and
 - ``(B) improvements in such methodology.
- ``(2) Elements to be studied. In conducting such review, the National Academy of Sciences should consider, but not be limited to, the following
 - ``(A) the techniques used for estimating and describing the carcinogenic potency to humans of hazardous air pollutants; and
 - ``(B) the techniques used for estimating exposure to hazardous air pollutants (for hypothetical and actual maximally exposed individuals as well as other exposed individuals).
- ``(3) Other health effects of concern. To the extent practicable, the Academy shall evaluate and report on the methodology for assessing the risk of adverse human health effects other than cancer for which safe thresholds of exposure may not exist, including, but not limited to, inheritable genetic mutations, birth defects, and reproductive dysfunctions.
- ``(4) Report. A report on the results of such review shall be submitted to the Senate Committee on Environment and Public Works, the House Committee on Energy and Commerce, the Risk Assessment and Management Commission established by section 303 of the Clean Air Act Amendments of 1990 and the Administrator not later than 30 months after the date of enactment of the Clean Air Act Amendments of 1990.
- ``(5) Assistance. The Administrator shall assist the Academy in gathering any information the Academy deems necessary to

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carry out this subsection. The Administrator may use any authority under this Act to obtain information from any person, and to require any person to conduct tests, keep and produce records, and make reports respecting research or other activities conducted by such person as necessary to carry out this subsection.

“(6) Authorization. Of the funds authorized to be appropriated to the Administrator by this Act, such amounts as are required shall be available to carry out this subsection.

“(7) Guidelines for carcinogenic risk assessment. The Administrator shall consider, but need not adopt, the recommendations contained in the report of the National Academy of Sciences prepared pursuant to this subsection and the views of the Science Advisory Board, with respect to such report. Prior to the promulgation of any standard under subsection (f), and after notice and opportunity for comment, the Administrator shall publish revised Guidelines for Carcinogenic Risk Assessment or a detailed explanation of the reasons that any recommendations contained in the report of the National Academy of Sciences will not be implemented. The publication of such revised Guidelines shall be a final Agency action for purposes of section 307.

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SECTION 301. HAZARDOUS AIR POLLUTANTS.
Section 112. Hazardous air pollutants.

(q) Savings Provision.

((F) The Board is authorized to conduct research and studies with respect to the potential for accidental releases, whether or not an accidental release has occurred, where there is evidence which indicates the presence of a potential hazard or hazards. To the extent practicable, the Board shall conduct such studies in cooperation with other Federal agencies having emergency response authorities, State and local governmental agencies and associations and organizations from the industrial, commercial, and nonprofit sectors.

TITLE III - HAZARDOUS AIR POLLUTANTS

Located on page 2570

SECTION 301. HAZARDOUS AIR POLLUTANTS.
Section 112. Hazardous air pollutants.

(q) Savings Provision.

“(S) The Board shall submit an annual report to the President and to the Congress which shall include, but not be limited to, information on accidental releases which have been investigated by or reported to the Board during the previous year, recommendations for legislative or administrative action which the Board has made, the actions which have been taken by the Administrator or the Secretary of Labor or the heads of other agencies to implement such recommendations, an identification of priorities for study and investigation in the succeeding year, progress in the development of risk-reduction technologies and the response to and implementation of significant research findings on chemical safety in the public and private sector.

TITLE III - HAZARDOUS AIR POLLUTANTS

Description of study

Investigation of the policy implications and appropriate uses of risk assessment and risk management in regulatory programs.

Located on pages 2574-2575

SEC. 303. RISK ASSESSMENT AND MANAGEMENT COMMISSION.

- (a) Establishment. There is hereby established a Risk Assessment and Management Commission (hereafter referred to in this section as the ``Commission''), which shall commence proceedings not later than 18 months after the date of enactment of the Clean Air Act Amendments of 1990 and which shall make a full investigation of the policy implications and appropriate uses of risk assessment and risk management in regulatory programs under various Federal laws to prevent cancer and other chronic human health effects which may result from exposure to hazardous substances.
- (b) Charge. The Commission shall consider
 - (1) the report of the National Academy of Sciences authorized by section 112(o) of the Clean Air Act, the use and limitations of risk assessment in establishing emission or effluent standards, ambient standards, exposure standards, acceptable concentration levels, tolerances or other environmental criteria for hazardous substances that present a risk of carcinogenic effects or other chronic health effects and the suitability of risk assessment for such purposes;
 - (2) the most appropriate methods for measuring and describing cancer risks or risks of other chronic health effects from exposure to hazardous substances considering such alternative approaches as the lifetime risk of cancer or other effects to the individual or individuals most exposed to emissions from a source or sources on both an actual and worst case basis, the range of such risks, the total number of health effects avoided by exposure reductions, effluent standards, ambient standards, exposures standards, acceptable concentration levels, tolerances and other environmental criteria, reductions in the number of persons exposed at various levels of risk, the incidence of cancer, and other public health factors;
 - (3) methods to reflect uncertainties in measurement and estimation techniques, the existence of synergistic or antagonistic effects among hazardous substances, the accuracy of extrapolating human health risks from animal exposure data, and the existence of unquantified direct or indirect effects on human health in risk assessment studies;

TITLE III - HAZARDOUS AIR POLLUTANTS

- (4) risk management policy issues including the use of lifetime cancer risks to individuals most exposed, incidence of cancer, the cost and technical feasibility of exposure reduction measures and the use of site-specific actual exposure information in setting emissions standards and other limitations applicable to sources of exposure to hazardous substances; and
- (5) and comment on the degree to which it is possible or desirable to develop a consistent risk assessment methodology, or a consistent standard of acceptable risk, among various Federal programs.

TITLE IV - ACID DEPOSITION CONTROL

Chapter 4.0: TITLE IV

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TITLE IV - ACID DEPOSITION CONTROL

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- Sec. 406. Industrial SO₂ Emissions
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- Sec. 408. Monitor acid rain program in canada.
- Sec. 409. Report on clean coal technologies export programs.
- Sec. 410. Acid deposition research by the united states fish and wildlife service.
- Sec. 411. Study of buffering and neutralizing agents.
- Sec. 412. Conforming amendment.
- Sec. 413. Special clean coal technology project.
-
- Sec. 401. Acid deposition control.

The Clean Air Act is amended by adding the following new title after title III:

``TITLE IV ACID DEPOSITION CONTROL

- ``Sec.401. Findings and purpose.
- ``Sec.402. Definitions.
- ``Sec.403. Sulfur dioxide allowance program for existing and new units.
- ``Sec.404. Phase I sulfur dioxide requirements.
- ``Sec.405. Phase II sulfur dioxide requirements.
- ``Sec.406. Allowances for States with emissions rates at or below 0.80 lbs/mmBtu.
- ``Sec.407. Nitrogen oxides emission reduction program.
- ``Sec.408. Permits and compliance plans.
- ``Sec.409. Repowered sources.
- ``Sec.410. Election for additional sources.
- ``Sec.411. Excess emissions penalty.
- ``Sec.412. Monitoring, reporting, and recordkeeping requirements.
- ``Sec.413. General compliance with other provisions.
- ``Sec.414. Enforcement.
- ``Sec.415. Clean coal technology regulatory incentives.
- ``Sec.416. Contingency guarantee; auctions, reserve.

TITLE IV - ACID DEPOSITION CONTROL

Located on page 2591

SEC. 401. ACID DEPOSITION CONTROL

``SEC.403.SULFUR DIOXIDE ALLOWANCE PROGRAM FOR EXISTING AND NEW
UNITS.

``(c) Interpollutant Trading. Not later than January 1, 1994,
the Administrator shall furnish to the Congress a study
evaluating the environmental and economic consequences of
amending this title to permit trading sulfur dioxide
allowances for nitrogen oxides allowances.

TITLE IV - ACID DEPOSITION CONTROL

Located on page 2632

SEC. 404. ACID DEPOSITION STANDARDS.

Not later than 36 months after the date of enactment of this Act, the Administrator of the Environmental Protection Agency shall transmit to the Committee on Environment and Public Works of the Senate and the Committee on Energy and Commerce of the House of Representatives a report on the feasibility and effectiveness of an acid deposition standard or standards to protect sensitive and critically sensitive aquatic and terrestrial resources. The study required by this section shall include, but not be limited to, consideration of the following matters:

- (1) identification of the sensitive and critically sensitive aquatic and terrestrial resources in the United States and Canada which may be affected by the deposition of acidic compounds;
- (2) description of the nature and numerical value of a deposition standard or standards that would be sufficient to protect such resources;
- (3) description of the use of such standard or standards in other Nations or by any of the several States in acid deposition control programs;
- (4) description of the measures that would need to be taken to integrate such standard or standards with the control program required by title IV of the Clean Air Act;
- (5) description of the state of knowledge with respect to source-receptor relationships necessary to develop a control program on such standard or standards and the additional research that is on-going or would be needed to make such a control program feasible; and
- (6) description of the impediments to implementation of such control program and the cost-effectiveness of deposition standards compared to other control strategies including ambient air quality standards, new source performance standards and the requirements of title IV of the Clean Air Act.

TITLE IV - ACID DEPOSITION CONTROL

Located on page 2634

SEC. 409. REPORT ON CLEAN COAL TECHNOLOGIES EXPORT PROGRAMS.

The Secretary of Energy in consultation with the Secretary of Commerce shall provide a report to the Congress within one year of enactment of this legislation which will identify, inventory and analyze clean coal technologies export programs within United States Government agencies including the Departments of State, Commerce, and Energy and at the Export-Import Bank and the Overseas Private Investment Corporation. The study shall address the effectiveness of interagency coordination of export promotion and determine the feasibility of establishing an interagency commission for the purpose of promoting the export and use of clean coal technologies.

TITLE IV - ACID DEPOSITION CONTROL

Located on page 2634

SEC. 411. STUDY OF BUFFERING AND NEUTRALIZING AGENTS.

There are authorized to be appropriated to the United States Fish and Wildlife Service of the Department of the Interior an amount equal to \$250,000 to fund a study to be conducted in conjunction with the University of Wyoming of the effectiveness of various buffering and neutralizing agents used to restore lakes and streams damaged by acid deposition.

TITLE V - PERMITS

Chapter 5.0: TITLE V

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TITLE V - PERMITS

TABLE OF CONTENTS: TITLE V

SEC. 501. PERMITS.

SEC. 501. PERMITS.

Add the following new title after title IV:

"TITLE V - PERMITS

- Sec. 501. Definitions
- Sec. 502. Permit programs.
- Sec. 503. Permit applications.
- Sec. 504. Permit requirements and conditions.
- Sec. 505. Notification to Administrator and contiguous States.
- Sec. 506. Other authorities.
- Sec. 507. Small business stationary source technical and
environmental compliance assistance program.

TITLE V - PERMITS

No research or studies located

TITLE VI - STRATOSPHERIC OZONE PROTECTION

Chapter 6.0: TITLE VI

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A report that identifies activities, substances, processes or combinations thereof that could reduce methane emissions and that are economically and technologically justified with or without consideration of environmental benefit	6.3

TITLE VI - STRATOSPHERIC OZONE PROTECTION

TABLE OF CONTENTS: TITLE VI

Sec. 601. Part B repeal.
Sec. 602. Stratospheric ozone protection.
Sec. 603. Methane studies.

SEC. 601. PART B REPEAL.

Part B of title I of the Clean Air Act entitled ``Ozone Protection'', sections 150 through 159, is hereby repealed.

SEC. 602. STRATOSPHERIC OZONE PROTECTION.

(a) New Title VI. The Clean Air Act is amended by adding the following new title after title V:

``TITLE VI STRATOSPHERIC OZONE PROTECTION

``Table of Contents

``Sec. 601. Definitions.
``Sec. 602. Listing of class I and class II substances.
``Sec. 603. Monitoring and reporting requirements.
``Sec. 604. Phase-out of production and consumption of class I substances.
``Sec. 605. Phase-out of production and consumption of class II substances.
``Sec. 606. Accelerated schedule.
``Sec. 607. Exchanges.
``Sec. 608. National recycling and emission reduction program.
``Sec. 609. Servicing of motor vehicle air conditioners.
``Sec. 610. Nonessential products containing chlorofluorocarbons.
``Sec. 611. Labeling.
``Sec. 612. Safe alternatives policy.
``Sec. 613. Federal procurement.
``Sec. 614. Relationship to other law.
``Sec. 615. Authority of Administrator.
``Sec. 616. Transfers among Parties to the Montreal Protocol.
``Sec. 617. International cooperation.
``Sec. 618. Miscellaneous.

TITLE VI - STRATOSPHERIC OZONE PROTECTION

Located on pages 2670-2671

SEC. 603. METHANE STUDIES.

- (a) Economically Justified Actions. Not later than 2 years after enactment of this Act, the Administrator shall prepare and submit a report to the Congress that identifies activities, substances, processes, or combinations thereof that could reduce methane emissions and that are economically and technologically justified with and without consideration of environmental benefit.
- (b) Domestic Methane Source Inventory and Control. Not later than 2 years after the enactment of this Act, the Administrator, in consultation and coordination with the Secretary of Energy and the Secretary of Agriculture, shall prepare and submit to the Congress reports on each of the following:
 - (1) Methane emissions associated with natural gas extraction, transportation, distribution, storage, and use. Such report shall include an inventory of methane emissions associated with such activities within the United States. Such emissions include, but are not limited to, accidental and intentional releases from natural gas and oil wells, pipelines, processing facilities, and gas burners. The report shall also include an inventory of methane generation with such activities.
 - (2) Methane emissions associated with coal extraction, transportation, distribution, storage, and use. Such report shall include an inventory of methane emissions associated with such activities within the United States. Such emissions include, but are not limited to, accidental and intentional releases from mining shafts, degasification wells, gas recovery wells and equipment, and from the processing and use of coal. The report shall also include an inventory of methane generation with such activities.
 - (3) Methane emissions associated with management of solid waste. Such report shall include an inventory of methane emissions associated with all forms of waste management in the United States, including storage, treatment, and disposal.
 - (4) Methane emissions associated with agriculture. Such report shall include an inventory of methane emissions associated with rice and livestock production in the United States.
 - (5) Methane emissions associated with biomass burning. Such report shall include an inventory of methane emissions associated with the intentional burning of agricultural wastes, wood, grasslands, and forests.

TITLE VI - STRATOSPHERIC OZONE PROTECTION

Located on pages 2670-2671

SEC. 603. METHANE STUDIES.

- (a) Economically Justified Actions. Not later than 2 years after enactment of this Act, the Administrator shall prepare and submit a report to the Congress that identifies activities, substances, processes, or combinations thereof that could reduce methane emissions and that are economically and technologically justified with and without consideration of environmental benefit.
- (b) Domestic Methane Source Inventory and Control. Not later than 2 years after the enactment of this Act, the Administrator, in consultation and coordination with the Secretary of Energy and the Secretary of Agriculture, shall prepare and submit to the Congress reports on each of the following:
 - (1) Methane emissions associated with natural gas extraction, transportation, distribution, storage, and use. Such report shall include an inventory of methane emissions associated with such activities within the United States. Such emissions include, but are not limited to, accidental and intentional releases from natural gas and oil wells, pipelines, processing facilities, and gas burners. The report shall also include an inventory of methane generation with such activities.
 - (2) Methane emissions associated with coal extraction, transportation, distribution, storage, and use. Such report shall include an inventory of methane emissions associated with such activities within the United States. Such emissions include, but are not limited to, accidental and intentional releases from mining shafts, degasification wells, gas recovery wells and equipment, and from the processing and use of coal. The report shall also include an inventory of methane generation with such activities.
 - (3) Methane emissions associated with management of solid waste. Such report shall include an inventory of methane emissions associated with all forms of waste management in the United States, including storage, treatment, and disposal.
 - (4) Methane emissions associated with agriculture. Such report shall include an inventory of methane emissions associated with rice and livestock production in the United States.
 - (5) Methane emissions associated with biomass burning. Such report shall include an inventory of methane emissions associated with the intentional burning of agricultural wastes, wood, grasslands, and forests.

TITLE VI - STRATOSPHERIC OZONE PROTECTION

- (6) Other methane emissions associated with human activities. Such report shall identify and inventory other domestic sources of methane emissions that are deemed by the Administrator and other such agencies to be significant.

TITLE VII - PROVISIONS RELATING TO ENFORCEMENT

Chapter 7.0: TITLE VII

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- Sec. 702. Compliance certification.
- Sec. 703. Administrative enforcement subpoenas.
- Sec. 704. Emergency orders.
- Sec. 705. Contractor listings.
- Sec. 706. Judicial review pending reconsideration of regulation.
- Sec. 707. Citizen suits.
- Sec. 708. Enhanced implementation and enforcement of new source review requirements.
- Sec. 709. Movable stationary sources.
- Sec. 710. Enforcement of new titles of the act.
- Sec. 711. Savings provisions and effective dates.

TITLE VII - PROVISIONS RELATING TO ENFORCEMENT

No research or studies located

TITLE VIII - MISCELLANEOUS PROVISIONS

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A study and report evaluating the health and environmental impacts of the combustion of contaminated used oil in ships, the reasons for using such oil for such purposes, the alternatives, and other relevant factors and impacts	8.10
Establish program to monitor and improve air quality along the border between the United States and Mexico	8.11
Through research, identify and evaluate sources and source regions of both visibility impairment and regions that provide predominately clean air in class I areas	8.13
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TITLE VIII - MISCELLANEOUS PROVISIONS

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- Sec. 802. Grants for support of air pollution planning and control programs.
- Sec. 803. Annual report repeal.
- Sec. 804. Emission factors.
- Sec. 805. Land use authority.
- Sec. 806. Virgin islands.
- Sec. 807. Hydrogen fuel cell vehicle study and test program.
- Sec. 808. Renewable energy and energy conservation incentives.
- Sec. 809. Clean air study of southwestern new mexico.
- Sec. 810. Impact on small communities.
- Sec. 811. Equivalent air quality controls among trading nations.
- Sec. 812. Analyses of costs and benefits.
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- Sec. 816. Visibility.
- Sec. 817. Role of secondary standards
- Sec. 818. International border areas.
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- Sec. 820. Epa report on magnetic levitation.
- Sec. 821. Information gathering on greenhouse gases contributing to global climate change.
- Sec. 822. Authorization.

TITLE VIII - MISCELLANEOUS PROVISIONS

Located on page 2690

SEC. 808. RENEWABLE ENERGY AND ENERGY CONSERVATION INCENTIVES.

- (a) Definition. For purposes of this section, ``renewable energy'' means energy from photovoltaic, solar thermal, wind, geothermal, and biomass energy production technologies.
- (b) Rate Incentives Study. Within 18 months after enactment, the Federal Energy Regulatory Commission, in consultation with the Environmental Protection Agency, shall complete a study which calculates the net environmental benefits of renewable energy, compared to nonrenewable energy, and assigns numerical values to them. The study shall include, but not be limited to, environmental impacts on air, water, land use, water use, human health, and waste disposal.
- (c) Model Regulations. In conjunction with the study in subsection (b), the Commission shall propose one or more models for incorporating the net environmental benefits into the regulatory treatment of renewable energy in order to provide economic compensation for those benefits.
- (d) Report. The Commission shall transmit the study and the model regulations to Congress, along with any recommendations on the best ways to reward renewable energy technologies for their environmental benefits, in a report no later than 24 months after enactment.

TITLE VIII - MISCELLANEOUS PROVISIONS

Located on page 2690

SEC. 809. CLEAN AIR STUDY OF SOUTHWESTERN NEW MEXICO.

The Administrator shall conduct a study of the causes of degraded visibility in southwestern New Mexico. The Administrator, in consultation with the Secretary of State, is encouraged to cooperate with the Government of Mexico, other Federal agencies, and any other appropriate organizations in conducting the study. Nothing in this section shall be construed as contravening or superseding the provisions of any international agreement in force for the United States as of the date of enactment of this section, or any relevant Federal statute.

TITLE VIII - MISCELLANEOUS PROVISIONS

Located on pages 2690-2691

SEC. 811. EQUIVALENT AIR QUALITY CONTROLS AMONG TRADING NATIONS.

(a) Findings. The Congress finds that

- (1) all nations have the responsibility to adopt and enforce effective air quality standards and requirements and the United States, in enacting this Act, is carrying out its responsibility in this regard;
- (2) as a result of complying with this Act, businesses in the United States will make significant capital investments and incur incremental costs in implementing control technology standards;
- (3) such compliance may impair the competitiveness of certain United States jobs, production, processes, and products if foreign goods are produced under less costly environmental standards and requirements than are United States goods; and
- (4) mechanisms should be sought through which the United States and its trading partners can agree to eliminate or reduce competitive disadvantages.

(b) Action by the President.

- (1) In general. Within 18 months after the date of the enactment of the Clean Air Act Amendments of 1990, the President shall submit to the Congress a report
 - (A) identifying and evaluating the economic effects of
 - (i) the significant air quality standards and controls required under this Act, and
 - (ii) the differences between the significant standards and controls required under this Act and similar standards and controls adopted and enforced by the major trading partners of the United States, on the international competitiveness of United States manufacturers; and
 - (B) containing a strategy for addressing such economic effects through trade consultations and negotiations.
- (2) Additional reporting requirements.
 - (A) The evaluation required under paragraph (1)(A) shall examine the extent to which the significant air quality standards and controls required under this Act are comparable to existing internationally-agreed norms.

TITLE VIII - MISCELLANEOUS PROVISIONS

- (B) The strategy required to be developed under paragraph (1)(B) shall include recommended options (such as the harmonization of standards and trade adjustment measures) for reducing or eliminating competitive disadvantages caused by differences in standards and controls between the United States and each of its major trading partners.
- (3) Public comment. Interested parties shall be given an opportunity to submit comments regarding the evaluations and strategy required in the report under paragraph (1). The President shall take any such comment into account in preparing the report.
- (4) Interim report. Within 9 months after the date of the enactment of the Clean Air Act Amendments of 1990, the President shall submit to the Congress an interim report on the progress being made in complying with paragraph (1).

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Located on pages 2691-2693

SEC. 812. ANALYSES OF COSTS AND BENEFITS.

- (a) Economic Impact Analyses. Section 312 of the Clean Air Act is amended to read as follows:

SEC. 312. ECONOMIC IMPACT ANALYSES.

- (a) The Administrator, in consultation with the Secretary of Commerce, the Secretary of Labor, and the Council on Clean Air Compliance Analysis (as established under subsection (f) of this section), shall conduct a comprehensive analysis of the impact of this Act on the public health, economy, and environment of the United States. In performing such analysis, the Administrator should consider the costs, benefits and other effects associated with compliance with each standard issued for
- (1) a criteria air pollutant subject to a standard issued under section 109;
- (2) a hazardous air pollutant listed under section 112, including any technology-based standard and any risk-based standard for such pollutant;
- (3) emissions from mobile sources regulated under title II of this Act;
- (4) a limitation under this Act for emissions of sulfur dioxide or nitrogen oxides;
- (5) a limitation under title VI of this Act on the production of any ozone-depleting substance; and
- (6) any other section of this Act.
- (b) In describing the benefits of a standard described in subsection (a), the Administrator shall consider all of the economic, public health, and environmental benefits of efforts to comply with such standard. In any case where numerical values are assigned to such benefits, a default assumption of zero value shall not be assigned to such benefits unless supported by specific data. The Administrator shall assess how benefits are measured in order to assure that damage to human health and the environment is more accurately measured and taken into account.
- (c) In describing the costs of a standard described in subsection (a), the Administrator shall consider the effects of such standard on employment, productivity,

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cost of living, economic growth, and the overall economy of the United States.

- ``(d) Not later than 12 months after the date of enactment of the Clean Air Act Amendments of 1990, the Administrator, in consultation with the Secretary of Commerce, the Secretary of Labor, and the Council on Clean Air Compliance Analysis, shall submit a report to the Congress that summarizes the results of the analysis described in subsection (a), which reports
 - ``(1) all costs incurred previous to the date of enactment of the Clean Air Act Amendments of 1990 in the effort to comply with such standards; and
 - ``(2) all benefits that have accrued to the United States as a result of such costs.
- ``(e) Not later than 24 months after the date of enactment of the Clean Air Act Amendments of 1990, and every 24 months thereafter, the Administrator, in consultation with the Secretary of Commerce, the Secretary of Labor, and the Council on Clean Air Compliance Analysis, shall submit a report to the Congress that updates the report issued pursuant to subsection (d), and which, in addition, makes projections into the future regarding expected costs, benefits, and other effects of compliance with standards pursuant to this Act as listed in subsection (a).
- ``(f) Not later than 6 months after the date of enactment of the Clean Air Act Amendments of 1990, the Administrator, in consultation with the Secretary of Commerce and the Secretary of Labor, shall appoint an Advisory Council on Clean Air Compliance Analysis of not less than nine members (hereafter in this section referred to as the 'Council'). In appointing such members, the Administrator shall appoint recognized experts in the fields of the health and environmental effects of air pollution, economic analysis, environmental sciences, and such other fields that the Administrator determines to be appropriate.
- ``(g) The Council shall
 - ``(1) review the data to be used for any analysis required under this section and make recommendations to the Administrator on the use of such data;
 - ``(2) review the methodology used to analyze such data and make recommendations to the Administrator on the use of such methodology; and

TITLE VIII - MISCELLANEOUS PROVISIONS

- “(3) prior to the issuance of a report required under subsection (d) or (e), review the findings of such report, and make recommendations to the Administrator concerning the validity and utility of such findings.”.
- (b) GAO Reports on Costs and Benefits. Commencing on the second year after the date of the enactment of the Clean Air Act Amendments of 1990 and annually thereafter, the Comptroller General of the General Accounting Office, in consultation with other agencies, such as the Environmental Protection Agency, the Department of Labor, the Department of Commerce, the United States Trade Representative, the National Academy of Sciences, the Office of Technology Assessment, the National Academy of Engineering, the Council on Environmental Quality, and the Surgeon General, shall provide a report to the Congress on the incremental human health and environmental benefits, and incremental costs beyond current clean air requirements of the new control strategies and technologies required by this Act. The report shall include, for such strategies and technologies, an analysis of the actual emissions reductions beyond existing practice, the effects on human life, human health and the environment (including both positive impacts and those that may be detrimental to jobs and communities resulting from loss of employers and employment, etc.), the energy security impacts, and the effect on United States products and industrial competitiveness in national and international markets.

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SEC. 813. COMBUSTION OF CONTAMINATED USED OIL IN SHIPS.

Within 2 years after the enactment of the Clean Air Act Amendments of 1990, the Administrator of the Environmental Protection Agency shall complete a study and submit a report to Congress evaluating the health and environmental impacts of the combustion of contaminated used oil in ships, the reasons for using such oil for such purposes, the alternatives to such use, the costs of such alternatives, and other relevant factors and impacts. In preparing such study, the Administrator shall obtain the view and comments of all interested persons and shall consult with the Secretary of Transportation and the Secretary of the department in which the Coast Guard is operating.

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Located on pages 2693-2694

SEC. 815. ESTABLISHMENT OF PROGRAM TO MONITOR AND IMPROVE AIR QUALITY IN REGIONS ALONG THE BORDER BETWEEN THE UNITED STATES AND MEXICO.

- (a) In General. The Administrator of the Environmental Protection Agency (hereinafter referred to as the "Administrator") is authorized, in cooperation with the Department of State and the affected States, to negotiate with representatives of Mexico to authorize a program to monitor and improve air quality in regions along the border between the United States and Mexico. The program established under this section shall not extend beyond July 1, 1995.
- (b) Monitoring and Remediation.
 - (1) Monitoring. The monitoring component of the program conducted under this section shall identify and determine sources of pollutants for which national ambient air quality standards (hereinafter referred to as "NAAQS") and other air quality goals have been established in regions along the border between the United States and Mexico. Any such monitoring component of the program shall include, but not be limited to, the collection of meteorological data, the measurement of air quality, the compilation of an emissions inventory, and shall be sufficient to the extent necessary to successfully support the use of a state-of-the-art mathematical air modeling analysis. Any such monitoring component of the program shall collect and produce data projecting the level of emission reductions necessary in both Mexico and the United States to bring about attainment of both primary and secondary NAAQS, and other air quality goals, in regions along the border in the United States. Any such monitoring component of the program shall include to the extent possible, data from monitoring programs undertaken by other parties.
 - (2) Remediation. The Administrator is authorized to negotiate with appropriate representatives of Mexico to develop joint remediation measures to reduce the level of airborne pollutants to achieve and maintain primary and secondary NAAQS, and other air quality goals, in regions along the border between the United States and Mexico. Such joint remediation measures may include, but not be limited to measures included in the Environmental Protection Agency's Control Techniques and Control Technology documents. Any such remediation program shall also identify those control measures implementation of which in Mexico would be expedited by the use of material and financial assistance of the United States.
- (c) Annual Reports. The Administrator shall, each year the program authorized in this section is in operation, report to Congress on the progress of the program in bringing nonattainment areas

TITLE VIII - MISCELLANEOUS PROVISIONS

along the border of the United States into attainment with primary and secondary NAAQS. The report issued by the Administrator under this paragraph shall include recommendations on funding mechanisms to assist in implementation of monitoring and remediation efforts.

- (d) Funding and Personnel. The Administrator may, where appropriate, make available, subject to the appropriations, such funds, personnel, and equipment as may be necessary to implement the provisions of this section. In those cases where direct financial assistance of the United States is provided to implement monitoring and remediation programs in Mexico, the Administrator shall develop grant agreements with appropriate representatives of Mexico to assure the accuracy and completeness of monitoring data and the performance of remediation measures which are financed by the United States. With respect to any control measures within Mexico funded by the United States, the Administrator shall, to the maximum extent practicable, utilize resources of Mexico where such utilization would reduce costs to the United States. Such funding agreements shall include authorization for the Administrator to
 - (1) review and agree to plans for monitoring and remediation;
 - (2) inspect premises, equipment and records to insure compliance with the agreements established under and the purposes set forth in this section; and
 - (3) where necessary, develop grant agreements with affected States to carry out the provisions of this section.

TITLE VIII - MISCELLANEOUS PROVISIONS

Located on page 2695

SEC. 816. VISIBILITY.

Subpart 2 of part C of title I of the Clean Air Act is amended by adding the following new section at the end thereof:

``SEC. 169B. VISIBILITY.

``(a) Studies.

``(1) The Administrator, in conjunction with the National Park Service and other appropriate Federal agencies, shall conduct research to identify and evaluate sources and source regions of both visibility impairment and regions that provide predominantly clean air in class I areas. A total of \$8,000,000 per year for 5 years is authorized to be appropriated for the Environmental Protection Agency and the other Federal agencies to conduct this research. The research shall include

``(A) expansion of current visibility related monitoring in class I areas;

``(B) assessment of current sources of visibility impairing pollution and clean air corridors;

``(C) adaptation of regional air quality models for the assessment of visibility;

``(D) studies of atmospheric chemistry and physics of visibility.

``(2) Based on the findings available from the research required in subsection (a)(1) as well as other available scientific and technical data, studies, and other available information pertaining to visibility source-receptor relationships, the Administrator shall conduct an assessment and evaluation that identifies, to the extent possible, sources and source regions of visibility impairment including natural sources as well as source regions of clear air for class I areas. The Administrator shall produce interim findings from this study within 3 years after enactment of the Clean Air Act Amendments of 1990.

TITLE VIII - MISCELLANEOUS PROVISIONS

Located on pages 2696-2697

SEC. 816. VISIBILITY.

Subpart 2 of part C of title I of the Clean Air Act is amended by adding the following new section at the end thereof:

``SEC. 169B. VISIBILITY.

- ``(d) Duties of Visibility Transport Commissions. A Visibility Transport Commission
- ``(1) shall assess the scientific and technical data, studies, and other currently available information, including studies conducted pursuant to subsection (a)(1), pertaining to adverse impacts on visibility from potential or projected growth in emissions from sources located in the Visibility Transport Region; and
- ``(2) shall, within 4 years of establishment, issue a report to the Administrator recommending what measures, if any, should be taken under the Clean Air Act to remedy such adverse impacts. The report required by this subsection shall address at least the following measures:
 - ``(A) the establishment of clean air corridors, in which additional restrictions on increases in emissions may be appropriate to protect visibility in affected class I areas;
 - ``(B) the imposition of the requirements of part D of this title affecting the construction of new major stationary sources or major modifications to existing sources in such clean air corridors specifically including the alternative siting analysis provisions of section 173(a)(5); and
 - ``(C) the promulgation of regulations under section 169A to address long range strategies for addressing regional haze which impairs visibility in affected class I areas.
- ``(e) Duties of the Administrator.
- ``(1) The Administrator shall, taking into account the studies pursuant to subsection (a)(1) and the reports pursuant to subsection (d)(2) and any other relevant information, within eighteen months of receipt of the report referred to in subsection (d)(2) of this section, carry out the Administrator's regulatory responsibilities under section 169A, including criteria for measuring 'reasonable progress' toward the national goal.

TITLE VIII - MISCELLANEOUS PROVISIONS

“(2)

Any regulations promulgated under section 169A of this title pursuant to this subsection shall require affected States to revise within 12 months their implementation plans under section 110 of this title to contain such emission limits, schedules of compliance, and other measures as may be necessary to carry out regulations promulgated pursuant to this subsection.

TITLE VIII - MISCELLANEOUS PROVISIONS

Located on page 2697

SEC. 817. ROLE OF SECONDARY STANDARDS

- (a) Report. The Administrator shall request the National Academy of Sciences to prepare a report to the Congress on the role of national secondary ambient air quality standards in protecting welfare and the environment. The report shall:
 - (1) include information on the effects on welfare and the environment which are caused by ambient concentrations of pollutants listed pursuant to section 108 and other pollutants which may be listed;
 - (2) estimate welfare and environmental costs incurred as a result of such effects;
 - (3) examine the role of secondary standards and the State implementation planning process in preventing such effects;
 - (4) determine ambient concentrations of each such pollutant which would be adequate to protect welfare and the environment from such effects;
 - (5) estimate the costs and other impacts of meeting secondary standards; and
 - (6) consider other means consistent with the goals and objectives of the Clean Air Act which may be more effective than secondary standards in preventing or mitigating such effects.
- (b) Submission to Congress; Comments; Authorization.
 - (1) The report shall be transmitted to the Congress not later than 3 years after the date of enactment of the Clean Air Act Amendments of 1990.
 - (2) At least 90 days before issuing a report the Administrator shall provide an opportunity for public comment on the proposed report. The Administrator shall include in the final report a summary of the comments received on the proposed report.
 - (3) There are authorized to be appropriated such sums as are necessary to carry out this section.

TITLE VIII - MISCELLANEOUS PROVISIONS

Located on page 2699

SEC. 820. EPA REPORT ON MAGNETIC LEVITATION.

The Administrator of the Environmental Protection Agency shall, not later than 6 months after the date of enactment of this Act, submit to the Congress and the President a report of the Administrator's activities under any agreement with the Department of Transportation entered into prior to such date of enactment providing for an analysis of the health and environmental aspects of magnetic levitation technology.

TITLE IX - CLEAN AIR RESEARCH

Chapter 9.0: TITLE IX

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TITLE IX - CLEAN AIR RESEARCH

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Sec. 901. Clean air research.

TITLE IX - CLEAN AIR RESEARCH

Located on page 2700

SEC. 901. CLEAN AIR RESEARCH

- (a) Research and Development Program.
- (b) Research Amendments. Section 103(c) through (f) of the Clean Air Act is amended to read as follows:
 - ((c) Air Pollutant Monitoring, Analysis, Modeling, and Inventory Research. In carrying out subsection (a), the Administrator shall conduct a program of research, testing, and development of methods for sampling, measurement, monitoring, analysis, and modeling of air pollutants. Such program shall include the following elements:
 - ((1) Consideration of individual, as well as complex mixtures of, air pollutants and their chemical transformations in the atmosphere.
 - ((2) Establishment of a national network to monitor, collect, and compile data with quantification of certainty in the status and trends of air emissions, deposition, air quality, surface water quality, forest condition, and visibility impairment, and to ensure the comparability of air quality data collected in different States and obtained from different nations.
 - ((3) Development of improved methods and technologies for sampling, measurement, monitoring, analysis, and modeling to increase understanding of the sources of ozone precursors, ozone formation, ozone transport, regional influences on urban ozone, regional ozone trends, and interactions of ozone with other pollutants. Emphasis shall be placed on those techniques which
 - ((A) improve the ability to inventory emissions of volatile organic compounds and nitrogen oxides that contribute to urban air pollution, including anthropogenic and natural sources;
 - ((B) improve the understanding of the mechanism through which anthropogenic and biogenic volatile organic compounds react to form ozone and other oxidants; and
 - ((C) improve the ability to identify and evaluate region-specific prevention and control options for ozone pollution.
 - ((4) Submission of periodic reports to the Congress, not less than once every 5 years, which evaluate and assess the effectiveness of air pollution control regulations and programs using monitoring and modeling data obtained pursuant to this subsection.

TITLE IX - CLEAN AIR RESEARCH

Located on pages 2700-2701

SEC. 901. CLEAN AIR RESEARCH

- (a) Research and Development Program.
- (b) Research Amendments. Section 103(c) through (f) of the Clean Air Act is amended to read as follows:
 - “(d) Environmental Health Effects Research.
 - “(1) The Administrator, in consultation with the Secretary of Health and Human Services, shall conduct a research program on the short-term and long-term effects of air pollutants, including wood smoke, on human health. In conducting such research program the Administrator
 - “(A) shall conduct studies, including epidemiological, clinical, and laboratory and field studies, as necessary to identify and evaluate exposure to and effects of air pollutants on human health;
 - “(B) may utilize, on a reimbursable basis, the facilities of existing Federal scientific laboratories and research centers; and
 - “(C) shall consult with other Federal agencies to ensure that similar research being conducted in other agencies is coordinated to avoid duplication.
 - “(2) In conducting the research program under this subsection, the Administrator shall develop methods and techniques necessary to identify and assess the risks to human health from both routine and accidental exposures to individual air pollutants and combinations thereof. Such research program shall include the following elements:
 - “(A) The creation of an Interagency Task Force to coordinate such program. The Task Force shall include representatives of the National Institute for Environmental Health Sciences, the Environmental Protection Agency, the Agency for Toxic Substances and Disease Registry, the National Toxicology Program, the National Institute of Standards and Technology, the National Science Foundation, the Surgeon General, and the Department of Energy. This Interagency Task Force shall be chaired by a representative of the Environmental Protection Agency and shall convene its first meeting within 60 days after the date of enactment of this subparagraph.
 - “(B) An evaluation, within 12 months after the date of enactment of this paragraph, of each of the hazardous air pollutants listed under section 112(b) of this Act, to decide, on the basis of available information, their relative priority for preparation

TITLE IX - CLEAN AIR RESEARCH

of environmental health assessments pursuant to subparagraph (C). The evaluation shall be based on reasonably anticipated toxicity to humans and exposure factors such as frequency of occurrence as an air pollutant and volume of emissions in populated areas. Such evaluation shall be reviewed by the Interagency Task Force established pursuant to subparagraph (A).

- “(C) Preparation of environmental health assessments for each of the hazardous air pollutants referred to in subparagraph (B), beginning 6 months after the first meeting of the Interagency Task Force and to be completed within 96 months thereafter. No fewer than 24 assessments shall be completed and published annually. The assessments shall be prepared in accordance with guidelines developed by the Administrator in consultation with the Interagency Task Force and the Science Advisory Board of the Environmental Protection Agency. Each such assessment shall include
 - “(i) an examination, summary, and evaluation of available toxicological and epidemiological information for the pollutant to ascertain the levels of human exposure which pose a significant threat to human health and the associated acute, subacute, and chronic adverse health effects;
 - “(ii) a determination of gaps in available information related to human health effects and exposure levels; and
 - “(iii) where appropriate, an identification of additional activities, including toxicological and inhalation testing, needed to identify the types or levels of exposure which may present significant risk of adverse health effects in humans.

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Located on page 2702

SEC. 901. CLEAN AIR RESEARCH

- (a) Research and Development Program.
- (b) Research Amendments. Section 103(c) through (f) of the Clean Air Act is amended to read as follows:

- “(e) Ecosystem Research. In carrying out subsection (a), the Administrator, in cooperation, where appropriate, with the Under Secretary of Commerce for Oceans and Atmosphere, the Director of the Fish and Wildlife Service, and the Secretary of Agriculture, shall conduct a research program to improve understanding of the short-term and long-term causes, effects, and trends of ecosystems damage from air pollutants on ecosystems. Such program shall include the following elements:
 - “(1) Identification of regionally representative and critical ecosystems for research.
 - “(2) Evaluation of risks to ecosystems exposed to air pollutants, including characterization of the causes and effects of chronic and episodic exposures to air pollutants and determination of the reversibility of those effects.
 - “(3) Development of improved atmospheric dispersion models and monitoring systems and networks for evaluating and quantifying exposure to and effects of multiple environmental stresses associated with air pollution.
 - “(4) Evaluation of the effects of air pollution on water quality, including assessments of the short-term and long-term ecological effects of acid deposition and other atmospherically derived pollutants on surface water (including wetlands and estuaries) and groundwater.
 - “(5) Evaluation of the effects of air pollution on forests, materials, crops, biological diversity, soils, and other terrestrial and aquatic systems exposed to air pollutants.
 - “(6) Estimation of the associated economic costs of ecological damage which have occurred as a result of exposure to air pollutants.

Consistent with the purpose of this program, the Administrator may use the estuarine research reserves established pursuant to section 315 of the Coastal Zone Management Act of 1972 (16 U.S.C. 1461) to carry out this research.

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Located on pages 2702-2703

SEC. 901. CLEAN AIR RESEARCH

- (a) Research and Development Program.
- (b) Research Amendments. Section 103(c) through (f) of the Clean Air Act is amended to read as follows:
 - “(f)Liquefied Gaseous Fuels Spill Test Facility.
 - “(1)The Administrator, in consultation with the Secretary of Energy and the Federal Coordinating Council for Science, Engineering, and Technology, shall oversee an experimental and analytical research effort, with the experimental research to be carried out at the Liquefied Gaseous Fuels Spill Test Facility. In consultation with the Secretary of Energy, the Administrator shall develop a list of chemicals and a schedule for field testing at the Facility. Analysis of a minimum of 10 chemicals per year shall be carried out, with the selection of a minimum of 2 chemicals for field testing each year. Highest priority shall be given to those chemicals that would present the greatest potential risk to human health as a result of an accidental release
 - “(A)from a fixed site; or
 - “(B)related to the transport of such chemicals.
 - “(2)The purpose of such research shall be to
 - “(A)develop improved predictive models for atmospheric dispersion which at a minimum
 - “(i) describe dense gas releases in complex terrain including man-made structures or obstacles with variable winds;
 - “(ii) improve understanding of the effects of turbulence on dispersion patterns; and
 - “(iii) consider realistic behavior of aerosols by including physicochemical reactions with water vapor, ground deposition, and removal by water spray;
 - “(B) evaluate existing and future atmospheric dispersion models by
 - “(i) the development of a rigorous, standardized methodology for dense gas models; and
 - “(ii) the application of such methodology to current dense gas dispersion models using data generated from field experiments; and

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- ``(C) evaluate the effectiveness of hazard mitigation and emergency response technology for fixed site and transportation related accidental releases of toxic chemicals.

Models pertaining to accidental release shall be evaluated and improved periodically for their utility in planning and implementing evacuation procedures and other mitigative strategies designed to minimize human exposure to hazardous air pollutants released accidentally.

- ``(3) The Secretary of Energy shall make available to interested persons (including other Federal agencies and businesses) the use of the Liquefied Gaseous Fuels Spill Test Facility to conduct research and other activities in connection with the activities described in this subsection.''.
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Located on pages 2703-2704

SEC. 901. CLEAN AIR RESEARCH

- “(g) Pollution Prevention and Emissions Control. In carrying out subsection (a), the Administrator shall conduct a basic engineering research and technology program to develop, evaluate, and demonstrate nonregulatory strategies and technologies for air pollution prevention. Such strategies and technologies shall be developed with priority on those pollutants which pose a significant risk to human health and the environment, and with opportunities for participation by industry, public interest groups, scientists, and other interested persons in the development of such strategies and technologies. Such program shall include the following elements:
- “(1) Improvements in nonregulatory strategies and technologies for preventing or reducing multiple air pollutants, including sulfur oxides, nitrogen oxides, heavy metals, PM-10 (particulate matter), carbon monoxide, and carbon dioxide, from stationary sources, including fossil fuel power plants. Such strategies and technologies shall include improvements in the relative cost effectiveness and long-range implications of various air pollutant reduction and nonregulatory control strategies such as energy conservation, including end-use efficiency, and fuel-switching to cleaner fuels. Such strategies and technologies shall be considered for existing and new facilities.
- “(2) Improvements in nonregulatory strategies and technologies for reducing air emissions from area sources.
- “(3) Improvements in nonregulatory strategies and technologies for preventing, detecting, and correcting accidental releases of hazardous air pollutants.
- “(4) Improvements in nonregulatory strategies and technologies that dispose of tires in ways that avoid adverse air quality impacts.

Nothing in this subsection shall be construed to authorize the imposition on any person of air pollution control requirements. The Administrator shall consult with other appropriate Federal agencies to ensure coordination and to avoid duplication of activities authorized under this subsection.

TITLE IX - CLEAN AIR RESEARCH

Located on page 2704

SEC. 901. CLEAN AIR RESEARCH

- ``(h) NIEHS Studies.
- ``(1) The Director of the National Institute of Environmental Health Sciences may conduct a program of basic research to identify, characterize, and quantify risks to human health from air pollutants. Such research shall be conducted primarily through a combination of university and medical school-based grants, as well as through intramural studies and contracts.
- ``(2) The Director of the National Institute of Environmental Health Sciences shall conduct a program for the education and training of physicians in environmental health.
- ``(3) The Director shall assure that such programs shall not conflict with research undertaken by the Administrator.
- ``(4) There are authorized to be appropriated to the National Institute of Environmental Health Sciences such sums as may be necessary to carry out the purposes of this subsection.

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Located on page 2704

SEC. 901. CLEAN AIR RESEARCH

- “(i) Coordination of Research. The Administrator shall develop and implement a plan for identifying areas in which activities authorized under this section can be carried out in conjunction with other Federal ecological and air pollution research efforts. The plan, which shall be submitted to Congress within 6 months after the date of enactment of this subsection, shall include
 - “(1) an assessment of ambient monitoring stations and networks to determine cost effective ways to expand monitoring capabilities in both urban and rural environments;
 - “(2) a consideration of the extent of the feasibility and scientific value of conducting the research program under subsection (e) to include consideration of the effects of atmospheric processes and air pollution effects; and
 - “(3) a methodology for evaluating and ranking pollution prevention technologies, such as those developed under subsection (g), in terms of their ability to reduce cost effectively the emissions of air pollutants and other airborne chemicals of concern.

Not later than 2 years after the date of enactment of this subsection, and every 4 years thereafter, the Administrator shall report to Congress on the progress made in implementing the plan developed under this subsection, and shall include in such report any revisions of the plan.

TITLE IX - CLEAN AIR RESEARCH

Located on page 2706

SEC. 901. CLEAN AIR RESEARCH

(d) Miscellaneous.

(1) Section 104 of the Clean Air Act is amended by striking ``low-cost'' each place it appears and inserting in lieu thereof ``cost-effective''.

(2) Section 104(c) of the Clean Air Act is amended to read as follows:

``(c) Clean Alternative Fuels. The Administrator shall conduct a research program to identify, characterize, and predict air emissions related to the production, distribution, storage, and use of clean alternative fuels to determine the risks and benefits to human health and the environment relative to those from using conventional gasoline and diesel fuels. The Administrator shall consult with other Federal agencies to ensure coordination and to avoid duplication of activities authorized under this subsection.''.
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TITLE IX - CLEAN AIR RESEARCH

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SEC. 901. CLEAN AIR RESEARCH

- (e) Assessment of International Air Pollution Control Technologies. The Administrator of the Environmental Protection Agency shall conduct a study that compares international air pollution control technologies of selected industrialized countries to determine if there exist air pollution control technologies in countries outside the United States that may have beneficial applications to this Nation's air pollution control efforts. With respect to each country studied, the study shall include the topics of urban air quality, motor vehicle emissions, toxic air emissions, and acid deposition. The Administrator shall, within 2 years after the date of enactment of this Act, submit to the Congress a report detailing the results of such study.

TITLE X - DISADVANTAGED BUSINESS CONCERNS

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TITLE X - DISADVANTAGED BUSINESS CONCERNS

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Sec. 1002.	Use of quotas prohibited.

TITLE X - DISADVANTAGED BUSINESS CONCERNS

Located on pages 2708-2709

SEC. 1001. DISADVANTAGED BUSINESS CONCERNS.

- (a) In General. In providing for any research relating to the requirements of the amendments made by the Clean Air Act Amendments of 1990 which uses funds of the Environmental Protection Agency, the Administrator of the Environmental Protection Agency shall, to the extent practicable, require that not less than 10 percent of total Federal funding for such research will be made available to disadvantaged business concerns.
- (b) Definition.
 - (1)(A) For purposes of subsection (a), the term ``disadvantaged business concern'' means a concern
 - (i) which is at least 51 percent owned by one or more socially and economically disadvantaged individuals or, in the case of a publicly traded company, at least 51 percent of the stock of which is owned by one or more socially and economically disadvantaged individuals; and
 - (ii) the management and daily business operations of which are controlled by such individuals.
 - (B)(i) A for-profit business concern is presumed to be a disadvantaged business concern for purposes of subsection (a) if it is at least 51 percent owned by, or in the case of a concern which is a publicly traded company at least 51 percent of the stock of the company is owned by, one or more individuals who are members of the following groups:
 - (I) Black Americans.
 - (II) Hispanic Americans.
 - (III) Native Americans.
 - (IV) Asian Americans.
 - (V) Women.
 - (VI) Disabled Americans.
 - (ii) The presumption established by clause (i) may be rebutted with respect to a particular business concern if it is reasonably established that the individual or individuals referred to in that clause with respect to that business concern are not experiencing impediments to establishing or developing such concern as a result of the individual's identification as a member of a group specified in that clause.

TITLE X - DISADVANTAGED BUSINESS CONCERNS

- (C) The following institutions are presumed to be disadvantaged business concerns for purposes of subsection (a):
- (i) Historically black colleges and universities, and colleges and universities having a student body in which 40 percent of the students are Hispanic.
 - (ii) Minority institutions (as that term is defined by the Secretary of Education pursuant to the General Education Provision Act (20 U.S.C. 1221 et seq.)).
 - (iii) Private and voluntary organizations controlled by individuals who are socially and economically disadvantaged.
- (D) A joint venture may be considered to be a disadvantaged business concern under subsection (a), notwithstanding the size of such joint venture, if
- (i) a party to the joint venture is a disadvantaged business concern; and
 - (ii) that party owns at least 51 percent of the joint venture.

A person who is not an economically disadvantaged individual or a disadvantaged business concern, as a party to a joint venture, may not be a party to more than 2 awarded contracts in a fiscal year solely by reason of this subparagraph.

- (E) Nothing in this paragraph shall prohibit any member of a racial or ethnic group that is not listed in subparagraph (B)(i) from establishing that they have been impeded in establishing or developing a business concern as a result of racial or ethnic discrimination.

TITLE XI - CLEAN AIR EMPLOYMENT TRANSITION ASSISTANCE

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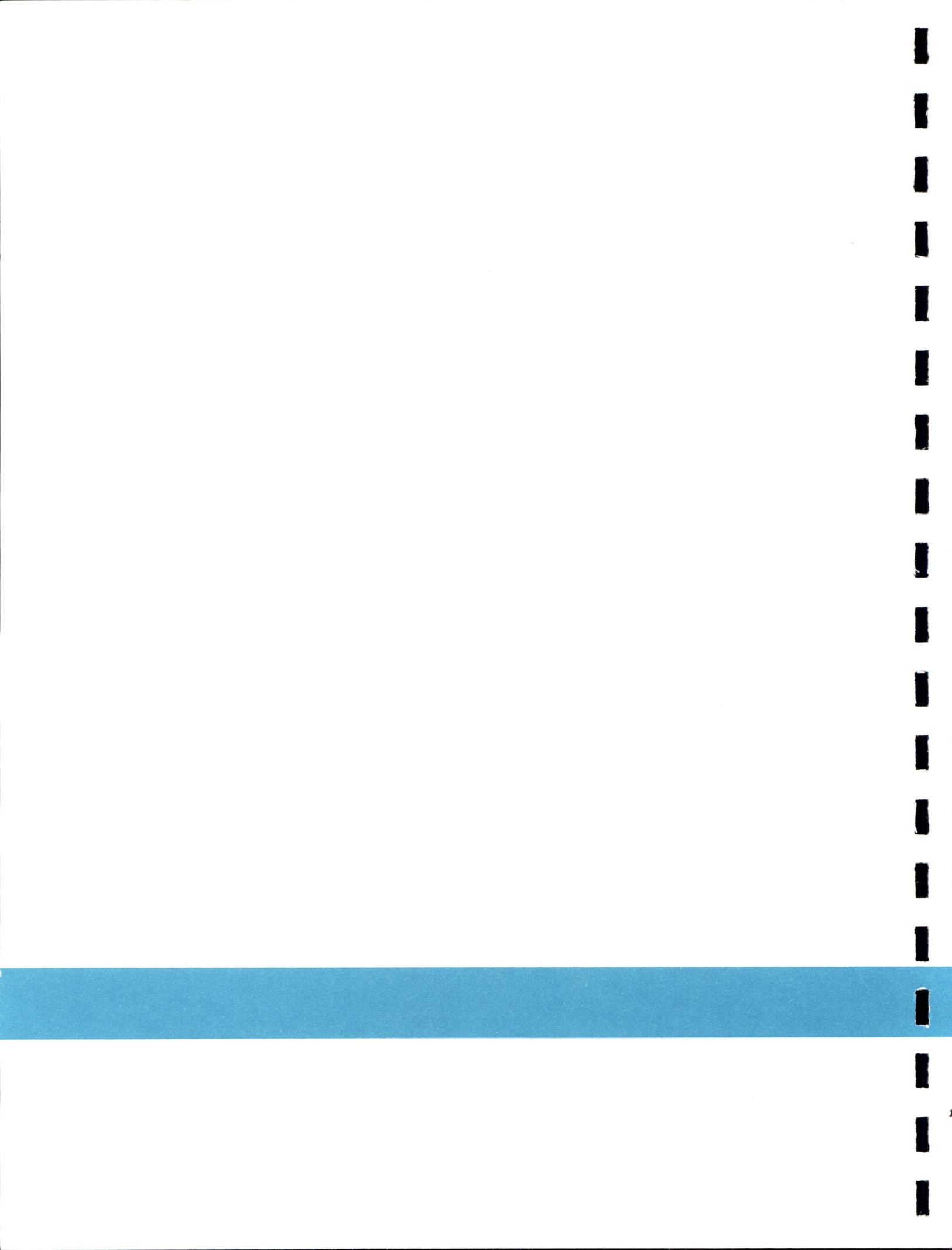
Sec. 1101. (a) Amendment. Part B of title III

- ``(j) GAO Assessment of Effects of Clean Air Act Compliance of Employment. The Comptroller General of the United States shall
- ``(1) identify and assess, to the extent possible, the effects on employment that are attributable to compliance with the provisions of the Clean Air Act; and
- ``(2) submit to the Congress on the 4th anniversary of the date of the enactment of this subtitle a written report on the assessments required under paragraph (1).''.

(b)Conforming Amendments.

- (1) The table of contents of the Job Training Partnership Act is amended by adding at the end of the items pertaining to part B of title III the following:

``Sec. 326. Clean air employment transition assistance.''.
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ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Part 63.52]
[AD-FRL]

Preliminary Draft List of Categories and Subcategories Under
Section 112 the Clean Air Act

AGENCY: Environmental Protection Agency (EPA)

ACTION: Notice of Availability of Preliminary Draft List of
Categories and Subcategories and Request for Information

SUMMARY: This notice announces the availability of a preliminary draft of the list of categories and subcategories required under Section 112(c) of the Clean Air Act (CAA) as amended in 1990. The CAA requires that "a list of all categories and subcategories" (hereafter collectively referred to as categories) "of major sources and area sources..." (listed under Section 112(c)(3)) of hazardous air pollutants (HAP's) be published within 1 year of enactment of the CAA Amendments of 1990. This notice provides the public with an opportunity to comment on the preliminary draft list of categories prior to the publication of the final list (scheduled to be published in November of 1991). Facilities within these categories of sources are subject to emissions standards under Section 112 of the CAA. The schedule for promulgation of these standards will be published within 2 years of enactment of the CAA Amendments of 1990.

The publication of a list of categories of major sources and area sources enables potentially affected sources, the public, and regulatory agencies to understand the scope of the HAP control program. Through this notice, the Agency solicits

comment on the preliminary draft list of categories of major and area sources subject to standards. The Agency also solicits comment on the procedures used to develop this list, and alternative interpretations of the subject legislation.

DATES: Comments. Written comments must be received on or before (30 days after publication in the FEDERAL REGISTER). Requests for extensions to this comment period are not anticipated to be granted, due to the limited time available for list publication.

ADDRESSES: Comments. Written comments should be submitted (in duplicate if possible) to: Air Docket (LE-131), Attn: Docket No. A-90-49, Environmental Protection Agency, 401 M Street S.W., Washington, D.C. 20460.

Docket. Docket No. A-90-49, containing supporting information used in developing the notice, is available for public inspection and copying between 8:00 a.m. and 4:00 p.m., Monday through Friday, at EPA's Air Docket, Room M-1500, First Floor, Waterside Mall, 401 M Street, S.W., Washington, D.C. 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Robert E. Rosensteel, Chief, Chemical Manufacturing Section, Chemicals and Petroleum Branch (MD-13), Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, (919) 541-5608; (FTS) 629-5608 concerning sources emitting organic pollutants, and Kenneth R. Durkee, Chief, Standards Documentation Section, Industrial Studies Branch (MD-13), Office of Air Quality Planning and Standards,

U. S. Environmental Protection Agency, Research Triangle Park,
North Carolina 27711, (919) 541-5425; (FTS) 629-5425, concerning
sources emitting inorganic pollutants. For general comments
about this notice contact Tom Lahre, Pollutant Assessment Branch
(MD-13), Office of Air Quality Planning and Standards,
U. S. Environmental Protection Agency, Research Triangle Park,
North Carolina 27711, (919) 541-5668; (FTS) 629-5668.

SUPPLEMENTARY INFORMATION:

I. BACKGROUND

The CAA Amendments of 1990 [Pub. L.101-549] require, under the revisions to Section 112, that EPA evaluate and control emissions of HAP's. The control of HAP's is achieved through promulgation of emission standards under Sections 112(d) and 112(f) for categories of sources that emit HAP's. This notice outlines the procedures used to identify a list of categories of major sources and area sources of HAP's, and includes a preliminary draft list of such categories. The term "major source" as defined in paragraph 112(a)(1) to mean "any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants." The EPA may establish a lesser quantity of pollutant emissions for a major source than that specified in the previous sentence, based on various characteristics of the pollutant including potency,

persistence, potential for bioaccumulation, or other relevant factors. The EPA may establish different criteria for a major source in the case of radionuclides. The term "area source," as defined in Section 112(a)(2), means any stationary source of HAP's that is not a major source. Section 112(c) requires EPA to list "categories of major sources and area sources." Because most groupings of sources are based on process or product-oriented criteria, they may include a mix of both major and area sources. The distinction between categories of major and area sources is discussed in more detail below.

Section 112(b) of Title III includes a list of HAP's that is composed of 189 chemicals, compounds, or groups of chemicals. Section 112(c)(1) requires EPA to publish, within 1 year of enactment of the CAA amendments of 1990, a list that includes all categories of major sources of these HAP's. Section 112(c)(3) requires EPA to include on this list each category of area sources that EPA finds presents a threat of adverse effects to human health or the environment (by such sources individually or in the aggregate) warranting regulation under Section 112.

There are additional specific requirements for listing categories under Section 112(c)(3) and Section 112(c)(6). Section 112(c)(3) refers to the area sources strategy under Section 112(k). This strategy requires, within 5 years of enactment of the CAA amendments, listing of categories of area sources which address 90 percent of the aggregate emissions of 30 HAP's. Section 112(c)(6) requires the listing of categories of sources which

address 90 percent of the aggregate emissions of seven specific pollutants within 5 years of enactment of the CAA amendments. Although some of the categories that will be identified under these Sections are probably already included on today's preliminary draft list, there are likely to be others which have not yet been identified due to a lack of data. The publication of today's draft list does not constitute completion of the requirements under Section 112(c)(3) or Section 112(c)(6).

Specific requirements are also provided for listing research facilities (Section 112(c)(7)), boat manufacturing (Section 112(c)(8)), and oil and gas wells and pipeline facilities (Section 112(n)(4)).

The EPA must periodically, but no less often than every 8 years, in response to public comment or new information, revise, if appropriate, the list of categories. The EPA may at any time designate additional categories of HAP sources according to the same criteria as were applied to the initial list.

Under Section 112(c)(9), the EPA may delete a category from the list, based on petition of any person or on the Administrator's own motion, whenever certain determinations are made. In the case of HAP's emitted by sources in listed categories that may result in cancer in humans, the EPA may delete a category if it is determined that no source in the category (or group of sources in the case of area sources) emits such HAP's in quantities which may cause a lifetime risk of cancer greater than 1 in 1 million to the individual in the

population who is most exposed to such emissions. In the case of HAP's emitted by sources in the category that may result in adverse health effects in humans other than cancer or adverse environmental effects, the EPA may delete a category if no source in the category (or group of sources in the case of area sources) emits such HAP's in quantities that exceed a level which is adequate to protect public health with an ample margin of safety and no adverse environmental effect will result from emissions from any source (or group of sources in the case of area sources). The EPA shall grant or deny a petition to delete a category within 1 year after the petition is filed. Procedures for such petitions will be addressed in a separate FEDERAL REGISTER notice.

Section 112(c)(2) requires establishment of emission standards under Section 112(d) for every category of sources included on the final list to be published under Section 112(c)(1). The emission standards written for the categories listed under Section 112(c) shall be promulgated according to the schedule for standards set forth in Section 112(e). Section 112(e) requires EPA to determine the priorities for promulgating emission standards for listed categories under Section 112(d). In determining such priorities, EPA shall consider the known or anticipated adverse effects of the emitted pollutants on health and the environment; the quantity and location of emissions; and the efficiency of grouping categories according to the pollutants emitted, or the processes or technologies used. A schedule

establishing a date for promulgation of emission standards for each category of HAP sources is to be published in a separate FEDERAL REGISTER notice, after an opportunity for comment, within 24 months of enactment (i.e., by November 15, 1992).

A. Discussion of Major Issues

1. Categories and Subcategories: Section 112(d)(1) states that in establishing emission standards the EPA "may distinguish among classes, types and sizes of sources within a category or subcategory." The terms "category" and "subcategory" are not defined under Section 112. The EPA has not distinguished categories from subcategories in today's preliminary draft list. Table 1, which is the preliminary draft list of categories, is arranged in large groups of industries. For some of these industry groupings, EPA has more data available to facilitate the identification of categories. For example, the air toxics emissions from the industry group identified as "Production of Synthetic Organic Chemicals" have been studied extensively and, therefore, many categories within this group have been identified. In this case, it may be useful to define the industry group as a category and to define all of the categories within this group as subcategories. For other industry groups, however, not as much is known about the processes involved and the resultant air toxics emissions. It is likely that further subdivision of many of the groups for which there is less information will be recognized as more data become available.

The issue of defining categories and subcategories is important in the development of the schedule of standards required under Section 112(e). Section 112(e)(1) outlines a schedule for the promulgation of emission standards in groups that are to be promulgated within 2, 4, 7, and 10 years after enactment of the CAA amendments. This schedule is to be based on the "categories of sources initially listed for regulation pursuant to subsection (c)(1)." Today's notice announces the preliminary draft of the list of categories. The definitive list, which will form the basis for the schedule for standards, is scheduled to be published in November of 1991 after opportunity for comment on today's preliminary draft list. Once the definitive list is published, however, Section 112(e)(1) requires that the categories of sources "initially" listed are to be used to develop the schedule for promulgation of emission standards. This means that if the categories on this list are subsequently divided into subcategories, all of these subcategories would have to be regulated on the same schedule (i.e., within either 2, 4, 7 or 10 years after enactment of the CAA amendments). If EPA intends to regulate various subcategories of a category at different times (e.g., regulate one subcategory within 4 years but other subcategories in the same category within 7 years), the subcategories need to be identified separately on the list of categories and subcategories

to be published in November, 1991¹. Due to a lack of information regarding characterization of industries, today's preliminary draft list may include categories which encompass multiple subcategories. The EPA is soliciting comment on the criteria for defining categories and subcategories. In addition, EPA is requesting information which could be used for the definition of subcategories for the groups of sources on today's preliminary draft list.

2. Listing of Categories of Area Sources: As noted above, Section 112(c)(3) requires that EPA list categories of area sources that present "a threat of adverse effects to human health or the environment" warranting regulation under Section 112. Categories of area sources may also be added to the list in satisfaction of the requirements of Section 112(k)(3)(B) (area source strategy) or Section 112(c)(6) (sources of specific pollutants). The showing required for listing categories of area sources under Section 112(c)(3) would not apply to the additional requirements under these provisions.

The draft list of source categories which accompanies today's notice does not distinguish between categories of major and area sources and does not present specific findings in support of the presence of categories of area sources on the list. As described in the following section, the information

¹ Nothing in this notice or list shall limit EPA's authority to promulgate emission standards for an entire facility or portion thereof, regardless of the number of source categories and subcategories contained in that facility.

used to develop this list is not sufficient to adequately determine whether individual facilities within listed categories exceed the major source definition (i.e., emission of 10 tons per year for one listed pollutant or 25 tons per year for a combination of listed pollutants or a lesser quantity for highly toxic pollutants). Although additional data are being gathered as well as solicited through this notice, the EPA anticipates that major information gaps will continue to exist by the November 15, 1991 statutory deadline for publication of the list of source categories. Several approaches are under consideration for addressing area source categories in the November listing. These include:

- a. Constrain the initial list to categories of major sources and those categories of area sources that are sufficiently well characterized to permit findings of potential adverse effects threat. Additional categories of area sources would be subsequently added to the list on the basis of further study and a finding of potential adverse effects. Such a finding could be made at any time prior to or at the proposal of a relevant emission standard.

An example of a well characterized category which is composed of a majority of area sources is commercial ethylene oxide sterilization. Although there are some major sources within this category, the majority of the sources are, under the definition in the CAA amendments, area sources. The EPA has evaluated this category for regulation development for several

years and has collected substantial information on the emissions, potential health impacts and control techniques available for commercial ethylene oxide sterilizers. Under this approach, the data available for commercial ethylene oxide sterilization would likely be sufficient to make the determination to include this category on the list, however, the nature of the specific finding necessary for listing would need to be defined (i.e., the data necessary to indicate the threat of adverse health effects). Although the ethylene oxide sterilization category provides an example of a well characterized category composed of mainly area sources, the amount of detailed information which exists for this category is not intended to represent the minimum necessary to make an adverse effects finding to support the listing of categories of area sources.

b. Make an interim finding that all categories of area sources are candidates for listing by virtue of their emissions of listed hazardous air pollutants. Remove any categories determined to be inappropriately listed through the source category deletion provisions in Section 112(c)(9) as outlined previously.

Under this approach, all categories included in the November listing, whether composed of major or area sources, would be subject to emissions standards under Section 112 unless deleted from the list prior to proposal of a relevant standard. The risk-based findings for deletion from the list (i.e., all facilities in the category pose lifetime cancer risk of less than

1 in 1 million for the most exposed individual and have a level of emissions which protects against other health and environmental effects with an ample margin of safety) would be operative for such deletions.

c. Develop a method for making the required finding for listing categories of area sources that is commensurate with the limitations of available data and apply the method comprehensively in the November publication. Approaches could include: evaluating the magnitude and nature of available data on constituent emissions, constructing a hazard or relative toxicity ranking of the pollutants emitted, or some combination of the above.

This approach would involve the development and application of criteria to support a finding of potential adverse effects required for the listing of categories of area sources. While a similar finding would also be needed for Approach a, under this approach the finding would be applied to all identified categories of area sources prior to the November publication of the list. Such a finding would be based on the limited data available supplemented by public comments prior to November. For example, if the finding were based, in part, on the magnitude of emissions of listed pollutants, the EPA would attempt to estimate the emissions for all identified categories of area sources in advance of the November publication of the list. In comparison to Approach a, the finding required for listing categories of area sources under this approach would

likely be less rigorous given the time constraint of the November publication deadline. This approach, however, would result in a more comprehensive initial list than the approach envisioned under Approach a.

The EPA requests comment on these or alternative approaches to the incorporation of area sources in the category list. The EPA also requests comments on alternative methods for making the "threat of adverse effects" finding for listing categories of area sources under Section 112(c)(3).

3. Utility and Solid Waste Incineration Categories: The listing of some categories of HAP-emitting sources is affected by other Sections of the CAA. The regulation of electric utility steam generating units (above 25 megawatts electrical output, hereafter referred to as categories of utilities) under Section 112 is dependent on the outcome of a study of this industry mandated under Section 112(n)(1). The Agency is contemplating two alternatives for the listing of categories of utilities. The first alternative is to omit categories of utilities from the list until such time as the conclusions of the Section 112(n)(1) study indicate that these categories warrant regulation under Section 112. This alternative, however, may appear inequitable because it would preserve the listing and regulation of other (potentially smaller) categories of non-utility boilers (e.g., industrial boilers) while omitting, at least until the completion of the Section 112(n)(1) study, utility boilers. The second alternative is to include categories of utilities on the list

until such time as the conclusions of the Section 112(n)(1) study indicate that these categories do not warrant regulation under Section 112. While this alternative would appear to be more equitable, it would require an action to delete the utility categories from the list if the Section 112(n)(1) study concludes that these categories do not warrant regulation under Section 112. Such a deletion action would be subject to the risk-based findings required under Section 112(c)(9) (outlined above). Categories of utility boilers above 25 megawatts of electrical output have been omitted from today's preliminary draft list. The Agency is soliciting comment on the appropriate alternative to employ for the listing of categories of utilities.

An additional group of categories on the list which are affected by another CAA Section are the solid waste incineration categories. Municipal waste combustors, medical waste incinerators as well as commercial and industrial waste incinerators are specifically addressed under the authority of Section 129. The categories included on the list developed under Section 112(c) are subject to regulation under Section 112. Solid waste incineration categories subject to regulation under Section 129 should not be listed under Section 112(c). Municipal waste combustors, medical waste incinerators and general industrial solid waste incineration were omitted from today's preliminary draft list because these categories are specifically addressed under Section 129. Due to a lack of data, however, there may be other categories on today's preliminary draft list which could be defined as categories of

commercial or industrial solid waste incineration. The Agency is soliciting information on listed categories which are engaged in commercial or industrial incineration of solid waste as defined under Section 129.

B. Identification of Categories

The preliminary draft list of categories is presented in Table 1. The section below describes the approach used for the development of today's preliminary draft list as well as the rationale for the use of this approach.

The general approach employed to identify categories of major and area sources was to identify all such categories associated with the emission of one or more of the listed HAP's. The basis for this approach originated from a review of the available data sources for this activity. There is no single comprehensive and complete source of information regarding the emissions of HAP's from industries in the United States. In addition, most of the data sources provide information covering only a limited range of industrial sectors (e.g., manufacturing). Some of these data sources are not specific to the listed air toxics or do not give source specific information regarding emission of HAP's. Given the relative paucity of available data and the need to be comprehensive in identification of categories of HAP-emitting sources, the approach employed herein was to identify and include in the preliminary draft list any category associated with the emission of one or more HAP's. The information sources available for this activity do not, in many

cases, support a further breakdown of this list and, thus, today's notice does not distinguish between categories of major and area sources. In addition, for many of the industries identified, there were insufficient data to distinguish source categories from subcategories. It is envisioned that such refinements will be made as the EPA learns more about the listed categories either in the regulatory development process or through information submitted from the public.

Several sources of information were used to identify categories of sources emitting HAP's. A document entitled "Documentation for Developing the Source Category List" which catalogs the literature source(s) used to identify specific categories is included in the docket. The data sources used are described below:

1. The National Emissions Data System (NEDS) is an EPA data base of reported emissions from sources emitting more than 100 tons per year of criteria pollutants (U.S. EPA, 1988), including volatile organic compounds (VOC) and particulate matter (PM). (NOTE: In 1990, the NEDS system was replaced with a new EPA software system, the Facility Subsystem of the Aerometric Information Retrieval System (AFS). The 1985 NEDS data have been converted to AFS.) The sources included in NEDS are classified by unique identifiers, termed source classification codes. Speciation profiles have been assigned to each of the source classification codes. These speciation profiles are an estimate of the chemical species breakdown of the total VOC or PM

constituents for a category. In many cases, the chemical species constituents are HAP's. A category was identified if HAP emissions were associated with a source classification code in NEDS.

There are several limitations to the use of the NEDS estimates and speciation factors to identify categories of emission sources. First, States are only required to report data for sources emitting more than 100 tons per year of a criteria pollutant. Second, not all categories have been identified within the NEDS, especially many of the categories that produce or use organic chemicals. The NEDS emission profiles generally were developed to aid modeling of criteria pollutants, not as a basis for a toxic pollutant inventory. Third, there is a lack of measured emissions data for many of the pollutant profiles listed in NEDS. For these reasons, other data sources were accessed to identify additional categories.

2. Categories of the synthetic organic chemical manufacturing industry (SOCMI) were identified from literature describing SOCMI reactants and products. A SOCMI category was listed if it either manufactured a chemical on the list of 189 HAP's or if it used one or more of the 189 HAP's to produce another chemical.

3. Published production and consumption data for organic chemicals were used to identify organic chemical end user processes emitting HAP's. There are a total of five general category groupings for which such data were used: foam blowing processes, process solvent use, polymerization processes, pesticide production, and pharmaceutical production.

Production and consumption data were obtained for each chemical from readily available literature. Each end use of a chemical was identified as a category.

4. The EPA's Toxic Release Inventory System (TRIS) was a fourth source that was used to identify HAP emitters. The TRIS data base contains emissions data reported by individual industrial facilities as required under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986. Emissions data in TRIS are reported on a plant-wide basis. Standard Industrial Classification Codes are reported in TRIS but the entries are usually not specific enough to identify categories of sources. For this reason, it is difficult to use the TRIS data base for identifying categories, or to determine where there is overlap between the TRIS data base and the methods described above. The TRIS data base did, however, identify plants emitting listed pollutants not identified through the methods described above. Where this was the case, a general "TRIS" category and the pollutant name was added to the list. Further work will be needed to identify the specific categories involved.

5. The list of categories developed by using the several data sources described above was augmented by reviewing existing studies by the EPA Office of Air Quality Planning and Standards. A major portion of this effort consisted of reviewing data developed in support of previous FEDERAL REGISTER notices describing previous Section 112 regulatory decisions. For the most part, the methods described above had already identified most of the categories. However, in some cases additional

categories were identified from these references and were added to the list.

II. REQUEST FOR COMMENT

The EPA requests comment in the following areas:

1. Comment is requested on the appropriate distinctions EPA should make between categories and subcategories. In addition, information is requested for the division of listed groups of sources into categories and subcategories. All information supporting the definition of categories and subcategories should be accompanied by adequate supporting documentation.

2. Comment is requested on the appropriate approach to employ for the listing of categories of area sources. The Agency also solicits comment on the specific findings required to fulfill the criteria for listing categories of area sources under Section 112(c)(3) (i.e., threat of adverse effects to health or the environment).

3. Comment is requested on the scope and completeness of the preliminary draft list of categories. Specifically, comments are requested on any additional or omitted categories or additional information about the categories on the preliminary draft list. All comments supporting the addition or removal of categories should be accompanied by adequate supporting information.

4. Comment is requested on the scope and use of the data bases noted above in identifying categories of sources emitting HAP's as well as any additional data bases which could be used for this purpose.

5. Comment is requested on the appropriate alternative for listing electric utility steam generating units.

6. Information is requested for the identification of categories engaged in commercial or industrial solid waste incineration as defined under Section 129.

III. MISCELLANEOUS

Executive Order 12291 requires EPA to determine whether this action is "major" and therefore subject to the requirement of a Regulatory Impact Analysis. This action is not major because it imposes no additional regulatory requirements. This notice was submitted to the Office of Management and Budget (OMB) for review. Any written comments from OMB and written EPA responses are available in the docket. Pursuant to 5 U.S.C. 605(6), I hereby certify that this action will not have a significant economic impact on a substantial number of small entities because it imposes no new requirements. This action does not contain any information collection requirements subject to OMB review under the Paperwork Reduction Act of 1980.

Date

William G. Rosenberg
Assistant Administrator
for Air and Radiation

TABLE 1
PRELIMINARY DRAFT LIST OF CATEGORIES OF MAJOR AND AREA SOURCES OF
HAZARDOUS AIR POLLUTANTS

Listed below are the categories of major and area sources associated with emission of one or more listed HAP's. For convenience, the list is organized by major industry groupings (e.g., polymers and resins production). The miscellaneous grouping contains categories which are not part of the other listed industry groups. The order of the categories within each industry group is based on the data bases used to develop this list not on their regulatory priority. Nothing in this notice or list shall limit EPA's ability to promulgate emission standards for an entire facility or portion thereof, regardless of the number of source categories and subcategories contained in that facility. A reference and a list of the HAP's associated with each category is included in the docket.

INDUSTRY GROUP -- FUEL COMBUSTION

CATEGORY NAME ?

- INDUSTRIAL EXTERNAL COMBUSTION BOILERS
- INSTITUTIONAL EXTERNAL COMBUSTION BOILERS
- EXTERNAL COMBUSTION SPACE HEATERS
- INDUSTRIAL ELECTRIC GENERATION TURBINES
- INDUSTRIAL RECIPROCATING IC ENGINES
- COMMERCIAL/INSTITUTIONAL TURBINES
- COMMERCIAL/INSTITUTIONAL TURBINES
- COMMERCIAL RECIPROCATING IC ENGINES
- TEST ENGINE AIRCRAFT
- TEST ENGINES - TURBINE
- TEST ENGINES - RECIPROCATING
- PROCESS HEATERS
- SECONDARY METALS PROCESS HEATERS
- PETROLEUM INDUSTRY PROCESS HEATERS
- OIL AND GAS STEAM GENERATION
- INDUSTRIAL IN-SITU FUEL USE
- PRESCRIBED BURNING
- RESIDENTIAL BOILERS
- RESIDENTIAL WOOD COMBUSTION- FIREPLACES
- RESIDENTIAL WOOD COMBUSTION- WOODSTOVES
- WASTE OIL COMBUSTION

INDUSTRY GROUP - METALLURGICAL INDUSTRY: NONFERROUS METALS

CATEGORY NAME

- ALLUMINUM PRODUCTION
- PRIMARY LEAD SMELTING
- PRIMARY METALS - MISCELLANEOUS
- SECONDARY ALUMINUM

INDUSTRY GROUP - METALLURGICAL INDUSTRY: NONFERROUS METALS
(Continued)

CATEGORY NAME

SECONDARY COPPER
BATTERY MANUFACTURE: NON-LEAD TYPES
CADMIUM REFINING
LEAD ACID BATTERY MANUFACTURING
NON-FERROUS ALLOYS PRODUCTION
PRIMARY COPPER SMELTERS
SECONDARY METALS- MISCELLANEOUS
ZINC SMELTING
FERROALLOYS PRODUCTION
IRON & STEEL MANUFACTURING
GRAY IRON FOUNDRIES
STEEL FOUNDRY
COKE BY-PRODUCT PLANTS
COKE OVENS
METAL SHREDDING (RECYCLING)
STEEL PICKLING

INDUSTRY GROUP - MINERAL PRODUCTS PROCESSING AND USE

CATEGORY NAME

TACONITE IRON ORE PROCESSING
ASPHALT CONCRETE MANUFACTURE
BRICK MANUFACTURING
CEMENT KILNS
GLASS MANUFACTURE
STONE QUARRIES
MINING OPERATION - SAND/GRAVEL
METAL PIPE COATING ASPHALT/COAL TAR
ASBESTOS FABRICATING
ASBESTOS MANUFACTURING
ASBESTOS MILLING
ASBESTOS REMOVAL: DEMOLITIONS
ASBESTOS REMOVAL: RENOVATIONS
ASBESTOS WASTE DISPOSAL: DEMOLITIONS
ASBESTOS WASTE DISPOSAL: RENOVATIONS
CONSTRUCTION: SPRAYING AND INSULATION
ASPHALT PAVING AND ROOFING OPERATIONS
ASPHALT PROCESSING
AUTOMOTIVE TRANSMISSION PLATES MANUFACTURING
BRAKE PARTS MANUFACTURING
CEILING TILE MANUFACTURING
FRICTION MATERIAL MANUFACTURING
MINERAL DRYERS/CALCINERS
MINERAL WOOL PRODUCTION
ORE FLOTATION
REFRACTORIES PRODUCTION
TALC MANUFACTURING
VERMICULITE MANUFACTURING
WOOL FIBERGLASS MANUFACTURING

INDUSTRY GROUP - PETROLEUM REFINERIES

CATEGORY NAME

PETROLEUM REFINING

INDUSTRY GROUP - PETROLEUM AND GASOLINE PRODUCTION AND MARKETING

? CATEGORY NAME

- OIL AND GAS PRODUCTION
- GASOLINE/PETROLEUM STORAGE
- PETROLEUM MARKETING (WITH BULK TERMINALS AND PLANTS)
- ? — MANGANESE FUEL ADDITIVES
- NATURAL GAS STORAGE/TRANSMISSION
- OIL SHALE RETORTING

INDUSTRY GROUP - SURFACE COATING PROCESSES

CATEGORY NAME

- FABRIC PRINTING
- SURFACE COATING OPERATIONS- GENERAL SOLVENT USES
- FABRIC COATING
- PAPER COATING
- LARGE APPLIANCE
- MAGNET WIRE
- AUTO AND LIGHT DUTY TRUCK
- METAL CAN
- METAL COIL
- WOOD FURNITURE
- METAL FURNITURE
- FLAT WOOD PRODUCTS
- PLASTIC PART
- LARGE SHIP
- LARGE AIRCRAFT
- PRINTING/PUBLISHING
- ARCHITECTURAL
- MAGNETIC TAPES

INDUSTRY GROUP - WASTE TREATMENT AND DISPOSAL

CATEGORY NAME

SOLID WASTE DISPOSAL-OPEN BURNING
SEWAGE SLUDGE INCINERATION
MUNICIPAL LANDFILLS
GROUNDWATER CLEANING
HAZARDOUS WASTE INCINERATION
TIRE BURNING
TIRE PYROLYSIS
COOLING WATER CHLORINATION-STEAM ELECTRICAL GENERATORS
WASTEWATER TREATMENT SYSTEMS
WATER TREATMENT PURIFICATION
WATER TREATMENT-BOILERS

INDUSTRY GROUP - AGRICULTURAL CHEMICALS PRODUCTION AND USE

CATEGORY NAME

2,4-D SALTS AND ESTERS PRODUCTION
4,6,-DINITRO-O-CRESOL PRODUCTION
4CHLORO2METHYLPHENOXYACETIC ACID PRODUCTION
BAYGON(tm) PRODUCTION
CAPTAFOL(tm) PRODUCTION
CAPTAN (tm) PRODUCTION
CARBAMATE INSECTICIDES PRODUCTION
CHLORTHALONIL PRODUCTION
DACTHAL(tm) PRODUCTION
DICHLORODIPHENYLTRICHLOROETHANE PRODUCTION
FUMIGATION USE
GRAIN FUMIGATION PRODUCTION
METRIBUZIN PRODUCTION
PARATHION USE
PENTACHLORONITROBENZENE PRODUCTION
PENTACHLOROPHENOL PRODUCTION
R-11 (BUTADIENE FURFURAL-COTRIMER) PRODUCTION
SODIUM PENTACHLOROPHENATE MANUFACTURE
SOIL FUMIGANT USE
SPACE FUMIGANT USE
SUBSTITUTED PHENYL UREAS PRODUCTION
THIOCARBAMATES PRODUCTION
TORDON ACID PRODUCTION

INDUSTRY GROUP - FIBERS PRODUCTION PROCESSES

CATEGORY NAME

ACRYLIC FIBERS/MODACRYLIC FIBERS
NYLON FIBERS
RAYON
SPANDEX
TRIACETATE FIBERS

INDUSTRY GROUP - FOOD AND AGRICULTURE INDUSTRY

CATEGORY NAME

- ☒ BAKERS YEAST MANUFACTURE
- ☒ COFFEE ROASTING
- ☒ COTTON GINNING
- ☒ PREPARED FOOD MANUFACTURING

INDUSTRY GROUP - PHARMACEUTICAL PRODUCTION PROCESSES

CATEGORY NAME

PHARMACEUTICALS PRODUCTION

INDUSTRY GROUP - POLYMERS AND RESINS PRODUCTION

CATEGORY NAME

ACETAL RESINS PRODUCTION
ACRYLONITRILE-BUTADIENE-STYRENE/STYRENE-ACRYLONITRILE
ALKYD RESINS PRODUCTION
BUTYL RUBBER PRODUCTION
CARBOXYMETHYLCELLULOSE PRODUCTION
CELLOPHANE PRODUCTION
CELLULOSE ETHERS
ELASTOMERS PRODUCTION
EPICHLOROHYDRIN ELASTOMERS
EPOXY RESINS
FOAMED PLASTICS
FORMALDEHYDE RESINS PRODUCTION
HYPALON(tm) PRODUCTION
MALEIC COPOLYMERS PRODUCTION
METHYL METHACRYLATE-ACRYLONITRILE-BUTADIENE-STYRENE

INDUSTRY GROUP - POLYMERS AND RESINS PRODUCTION (CONTINUED)

CATEGORY NAME

METHYL METHACRYLATE-BUTADIENE STYRENE TERPOLYMERS
METHYLCELLULOSE PRODUCTION
NEOPRENE PRODUCTION
NITRILE BUTADIENE RUBBER PRODUCTION
NYLON PLASTICS PRODUCTION
PHENOLIC RESINS PRODUCTION
POLYBUTADIENE RUBBER PRODUCTION
POLYCARBONATES PRODUCTION
POLYESTER PLASTICS
POLYESTER RESINS PRODUCTION
POLYETHER POLYOLS PRODUCTION
POLYETHYLENE TEREPHTHALATE PRODUCTION
POLYMERIZATION OF VINYLIDENE CHLORIDE
POLYMETHYL METHACRYLATE RESINS PRODUCTION
POLYSTYRENE PRODUCTION
POLYURETHANE FOAM
POLYURETHANE PRODUCTION
POLYVINYL ACETATE EMULSIONS
POLYVINYL ALCOHOL PRODUCTION
POLYVINYL BUTYRAL PRODUCTION
POLYVINYL CHLORIDE AND COPOLYMERS PRODUCTION
REINFORCED PLASTICS
RESINS
STYRENE BUTADIENE RUBBER AND LATEX PRODUCTION

INDUSTRY GROUP - PRODUCTION AND USE OF INORGANIC CHEMICALS

CATEGORY NAME

ALUMINUM CHLORIDE
ALUMINUM FLUORIDE
AMMONIUM PHOSPHATES
AMMONIUM SULFATE
CALCIUM OXIDE PRODUCTION
CARBON BLACK
CHARCOAL
CHEMICAL INTERMEDIATE
CHLORINE
CHROMIUM CHEMICALS MANUFACTURE
CYANURIC CHLORIDE
DETERGENT
FERTILIZER FORMULATION AND USE

INDUSTRY GROUP - PRODUCTION AND USE OF INORGANIC CHEMICALS

CATEGORY NAME

FLUORIDES
HYDROCHLORIC ACID
HYDROGEN CYANIDE
HYDROGEN FLOURIDE
ISOPROPANOLAMINES
MANGANESE CHEMICALS
PHOSPHATE FERTILIZERS
PHOSPHORIC ACID
PHOSPHORUS PENTASULFIDE PRODUCTION
PHOSPHORUS PRODUCTION
PHOSPHORUS TRICHLORIDE/OXYCHLORIDE PRODUCTION
QUATERNARY AMMONIUM COMPOUNDS PRODUCTION
ROCKET ENGINE FUEL
SODIUM CYANIDE PRODUCTION
URANIUM HEXAFLUORIDE PRODUCTION

INDUSTRY GROUP - PRODUCTION OF SYNTHETIC ORGANIC CHEMICALS

CATEGORY NAME

ACENAPHTHENE
ACETALDEHYDE PRODUCTION
ACETALDOL PRODUCTION
ACETAMIDE PRODUCTION
ACETANILIDE PRODUCTION
ACETIC ACID PRODUCTION
ACETIC ANHYDRIDE PRODUCTION
ACETOACETANILIDE PRODUCTION
ACETONE CYANOHYDRIN PRODUCTION
ACETONE PRODUCTION
ACETONITRILE PRODUCTION
ACETOPHENONE PRODUCTION
ACETYL CHLORIDE PRODUCTION
ACROLEIN PRODUCTION
ACRYLAMIDE PRODUCTION
ACRYLIC ACID PRODUCTION
ACRYLONITRILE PRODUCTION
ADIPONITRILE PRODUCTION
ALIZARIN
ALKYL ANTHRAQUINONES PRODUCTION
ALKYL NAPHTHALENE SULFONATES PRODUCTION
ALLYL ALCOHOL PRODUCTION

INDUSTRY GROUP - PRODUCTION OF SYNTHETIC ORGANIC CHEMICALS

CATEGORY NAME

ALLYL CHLORIDE PRODUCTION
ALLYL CYANIDE PRODUCTION
AMINOPHENOL (P-ISOMER) PRODUCTION
AMINOPHENOL SULFONIC ACID (O,P-ISOMER) PRODUCTION
AMMONIUM THIOCYANATE PRODUCTION
ANILINE HYDROCHLORIDE PRODUCTION
ANILINE PRODUCTION
ANISIDINE (O-ISOMER) PRODUCTION
ANTHRACENE
ANTHRAQUINONE PRODUCTION
AZOBENZENE PRODUCTION
BENZALDEHYDE PRODUCTION
BENZENE PRODUCTION
BENZENEDISULFONIC ACID PRODUCTION
BENZENESULFONIC ACID PRODUCTION
BENZIL PRODUCTION
BENZILIC ACID PRODUCTION
BENZOIC ACID PRODUCTION
BENZOIN PRODUCTION
BENZOPHENONE PRODUCTION
BENZOYL CHLORIDE PRODUCTION

INDUSTRY GROUP - PRODUCTION OF SYNTHETIC ORGANIC CHEMICALS
(Continued)

CATEGORY NAME

BENZYL ACETATE PRODUCTION
BENZYL ALCOHOL PRODUCTION
BENZYL BENZOATE PRODUCTION
BENZYL CHLORIDE PRODUCTION
BENZYL DICHLORIDE PRODUCTION
BIPHENYL PRODUCTION
BIS(CHLOROMETHYL)ETHER PRODUCTION
BISPHENOL A PRODUCTION
BROMOBENZENE PRODUCTION
BROMOFORM PRODUCTION
BROMONAPHTHALENE PRODUCTION
BUTADIENE (1,3-ISOMER) PRODUCTION
BUTANEDIOL (1,4-ISOMER) PRODUCTION
BUTYL ACRYLATE (N-ISOMER) PRODUCTION
BUTYLAMINE (N-ISOMER) PRODUCTION
BUTYLAMINE (S-ISOMER) PRODUCTION
BUTYLAMINE (T-ISOMER) PRODUCTION
BUTYLBENZYL PHTHALATE PRODUCTION
BUTYLENE GLYCOL (1,3-ISOMER) PRODUCTION
BUTYROLACTONE PRODUCTION
CAPROLACTAM PRODUCTION
CARBARYL PRODUCTION
CARBAZOLE
CARBON DISULFIDE PRODUCTION
CARBON TETRABROMIDE PRODUCTION
CARBON TETRACHLORIDE PRODUCTION
CARBON TETRAFLUORIDE
CHLORAL PRODUCTION
CHLOROACETIC ACID PRODUCTION
CHLOROACETOPHENONE (2-ISOMER) PRODUCTION
CHLOROANILINE (O-ISOMER) PRODUCTION
CHLOROANILINE (P-ISOMER) PRODUCTION
CHLOROBENZALDEHYDE PRODUCTION
CHLOROBENZENE PRODUCTION
CHLORODIFLUOROETHANE PRODUCTION
CHLORODIFLUOROMETHANE PRODUCTION
CHLOROFORM PRODUCTION
CHLORONAPHTHALENE PRODUCTION
CHLORONITROBENZENE (1,3-ISOMER) PRODUCTION
CHLORONITROBENZENE (O-ISOMER) PRODUCTION
CHLORONITROBENZENE (P-ISOMER) PRODUCTION
CHLOROPHENOLS PRODUCTION

INDUSTRY GROUP - PRODUCTION OF SYNTHETIC ORGANIC CHEMICALS
(Continued)

CATEGORY NAME

CHLOROPRENE (2-CHLORO-1,3-BUTADIENE) PRODUCTION
CHLOROSULFONIC ACID PRODUCTION
CHLOROTOLUENE (M-ISOMER) PRODUCTION
CHLOROTOLUENE (O-ISOMER) PRODUCTION
CHLOROTOLUENE (P-ISOMER) PRODUCTION
CHLOROTRIFLUOROMETHANE PRODUCTION
CHRYSENE
CRESOL (M-ISOMER) PRODUCTION
CRESOLS (O-ISOMER) PRODUCTION
CRESOLS (P-ISOMER) PRODUCTION
CRESOLS CRESYLIC ACID (MIXED) PRODUCTION
CROTONALDEHYDE PRODUCTION
CUMENE PRODUCTION
CUMENE HYDROPEROXIDE PRODUCTION
CYANAMIDE PRODUCTION
CYANOACETIC ACID PRODUCTION
CYANOFORMAMIDE PRODUCTION
CYANOGEN CHLORIDE PRODUCTION
CYANURIC CHLORIDE PRODUCTION
CYCLOHEXANE PRODUCTION
CYCLOHEXANOL PRODUCTION
CYCLOHEXANONE PRODUCTION
CYCLOHEXYLAMINE PRODUCTION
CYCLOOCTADIENE (1,5-ISOMER) PRODUCTION
CYCLOOCTADIENE PRODUCTION
DECAHYDRONAPHTHALATE PRODUCTION
DI(2-METHOXYETHYL) PHTHALATE PRODUCTION
DI-O-TOLYGUANIDINE PRODUCTION
DIACETOXY-2-BUTENE (1,4-ISOMER) PRODUCTION
DIALLYL PHTHALATE PRODUCTION
DIAMINOPHENOL HYDROCHLORIDE PRODUCTION
DIBROMOMETHANE PRODUCTION
DIBUTOXYETHYL PHTHALATE PRODUCTION
DICHLORO-1-BUTENE (3,4-ISOMER) PRODUCTION
DICHLORO-2-BUTENE (1,4-ISOMER) PRODUCTION
DICHLOROANILINE (ALL ISOMERS) PRODUCTION
DICHLOROBENZENE (1,4-ISOMER) (P- ISOMER) PRODUCTION
DICHLOROBENZENE (M-ISOMER) PRODUCTION
DICHLOROBENZENE (O-ISOMER) PRODUCTION
DICHLORODIFLUOROMETHANE PRODUCTION
DICHLOROETHANE (1,2-ISOMER) PRODUCTION
DICHLOROETHYL ETHER PRODUCTION

INDUSTRY GROUP - PRODUCTION OF SYNTHETIC ORGANIC CHEMICALS
(Continued)

CATEGORY NAME

DICHLOROETHYLENE (1,2- ISOMER) PRODUCTION
DICHLOROPHENOL (2,4-ISOMER) PRODUCTION
DICHLOROPROPENE (1,3-ISOMER) PRODUCTION
DICHLOROTETRAFLUOROETHANE PRODUCTION
DICYANIDIAMIDE
DIETHANOLAMINE
DIETHYL PHTHALATE PRODUCTION
DIETHYLAMINE PRODUCTION
DIETHYLANILINE (2,6-ISOMER) PRODUCTION
DIETHYLENE GLYCOL DIBUTYL ETHER PRODUCTION
DIETHYLENE GLYCOL DIETHYL ETHER PRODUCTION
DIETHYLENE GLYCOL DIMETHYL ETHER PRODUCTION
DIETHYLENE GLYCOL MONOBUTYL ETHER PRODUCTION
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE PRODUCTION
DIETHYLENE GLYCOL MONOETHYL ETHER PRODUCTION
DIETHYLENE GLYCOL MONOETHYL ETHER ACETATE PRODUCTION
DIETHYLENE GLYCOL MONOHEXYL ETHER PRODUCTION
DIETHYLENE GLYCOL MONOMETHYL ETHER PRODUCTION
DIETHYLENE GLYCOL MONOMETHYL ETHER ACETATE PRODUCTION
DIETHYLENE GLYCOL PRODUCTION
DIISODECYL PHTHALATE PRODUCTION
DIISOCTYL PHTHALATE PRODUCTION
DIMETHYL BENZIDINE (3,3-ISOMER) PRODUCTION
DIMETHYL ETHER - N,N PRODUCTION
DIMETHYL FORMAMIDE (N,N-ISOMER) PRODUCTION
DIMETHYL HYDRAZINE (1,1-ISOMER) PRODUCTION
DIMETHYL PHTHALATE PRODUCTION
DIMETHYL SULFATE PRODUCTION
DIMETHYL TEREPHTHALATE PRODUCTION
DIMETHYLAMINE PRODUCTION
DIMETHYLAMINOETHANOL (2-ISOMER) PRODUCTION
DIMETHYLANILINE - N,N PRODUCTION
DINITROBENZENES PRODUCTION
DINITROPHENOL (2,4-ISOMER) PRODUCTION
DINITROTOLUENE (2,4-ISOMER) PRODUCTION
DIOXANE PRODUCTION
DIOXILANE PRODUCTION
DIPHENYL METHANE PRODUCTION
DIPHENYL OXIDE PRODUCTION
DIPHENYL THIOUREA PRODUCTION
DIPHENYLAMINE PRODUCTION
DIPROPYLENE GLYCOL PRODUCTION

INDUSTRY GROUP - PRODUCTION OF SYNTHETIC ORGANIC CHEMICALS
(Continued)

CATEGORY NAME

DODECYL BENZENE (BRANCHED) PRODUCTION
DODECYL PHENOL (BRANCHED) PRODUCTION
DODECYLANILINE PRODUCTION
DODECYLBENZENE (N-ISOMER) PRODUCTION
DODECYLPHENOL PRODUCTION
EPICHLOROHYDRIN PRODUCTION
ETHANOLAMINES (ALL ISOMERS) PRODUCTION
ETHYL ACETATE PRODUCTION
ETHYL ACRYLATE PRODUCTION
ETHYL BENZENE PRODUCTION
ETHYL CHLORIDE PRODUCTION
ETHYL CHLOROACETATE PRODUCTION
ETHYL ORTHOFORMATE PRODUCTION
ETHYLAMINE PRODUCTION
ETHYLANILINE (N-ISOMER) PRODUCTION
ETHYLANILINE (O-ISOMER) PRODUCTION
ETHYLCELLULOSE PRODUCTION
ETHYLCYANOACETATE PRODUCTION
ETHYLENE DIBROMIDE PRODUCTION
ETHYLENE GLYCOL DIACETATE PRODUCTION
ETHYLENE GLYCOL DIBUTYL ETHER PRODUCTION
ETHYLENE GLYCOL DIETHYL ETHER PRODUCTION
ETHYLENE GLYCOL DIMETHYL ETHER PRODUCTION
ETHYLENE GLYCOL MONOACETATE PRODUCTION
ETHYLENE GLYCOL MONOBUTYL ETHER PRODUCTION
ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE PRODUCTION
ETHYLENE GLYCOL MONOETHYL ETHER PRODUCTION
ETHYLENE GLYCOL MONOETHYL ETHER ACETATE PRODUCTION
ETHYLENE GLYCOL MONOHEXYL ETHER PRODUCTION
ETHYLENE GLYCOL MONOMETHYL ETHER PRODUCTION
ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE PRODUCTION
ETHYLENE GLYCOL MONOOCTYL ETHER PRODUCTION
ETHYLENE GLYCOL MONOPHENYL ETHER PRODUCTION
ETHYLENE GLYCOL MONOPROPYL ETHER PRODUCTION
ETHYLENE GLYCOL PRODUCTION
ETHYLENE IMINE PRODUCTION
ETHYLENE OXIDE PRODUCTION
ETHYLENEDIAMINE PRODUCTION
ETHYLENEDIAMINE TETRAACETIC ACID PRODUCTION
ETHYLHEXYL ACRYLATE (2-ISOMER) PRODUCTION
ETHYLNAPHTHALENE (2-ISOMER)
FLUORANTHENE

INDUSTRY GROUP - PRODUCTION OF SYNTHETIC ORGANIC CHEMICALS
(Continued)

CATEGORY NAME

FORMALDEHYDE PRODUCTION
FORMAMIDE PRODUCTION
FORMIC ACID PRODUCTION
FUMARIC ACID PRODUCTION
GLUTARALDEHYDE PRODUCTION
GLYCERALDEHYDE PRODUCTION
GLYCEROL DICHLOROHYDRIN PRODUCTION
GLYCEROL PRODUCTION
GLYCINE PRODUCTION
GLYOXAL PRODUCTION
GUANIDINE NITRATE
GUANIDINE PRODUCTION
HEXACHLOROBENZENE PRODUCTION
HEXACHLOROBUTADIENE PRODUCTION
HEXACHLOROCYCLOPENTADIENE PRODUCTION
HEXACHLOROETHANE PRODUCTION
HEXADIENE (1,4-ISOMER) PRODUCTION
HEXAMETHYLENETETRAMINE PRODUCTION
HEXANETRIOL (1,2,6- ISOMER) PRODUCTION
HYDROGEN CYANIDE PRODUCTION
HYDROQUINONE PRODUCTION
HYDROXYADIPALDEHYDE PRODUCTION
IMINODIETHANOL (2,2-ISOMER) PRODUCTION
ISOBUTYL ACRYLATE PRODUCTION
ISOBUTYLENE PRODUCTION
ISOPHORONE NITRILE PRODUCTION
ISOPHORONE PRODUCTION
ISOPHTHALIC ACID PRODUCTION
ISOPROPYLPHENOL PRODUCTION
LACTIC ACID PRODUCTION
LEAD PHTHALATE PRODUCTION
LINEAR ALKYL BENZENE PRODUCTION
MALEIC ANHYDRIDE PRODUCTION
MALEIC HYDRAZIDE PRODUCTION
MALIC ACID PRODUCTION
METANILIC ACID PRODUCTION
METHACRYLIC ACID PRODUCTION
METHANOL PRODUCTION
METHIONINE PRODUCTION
METHYL ACETATE PRODUCTION
METHYL ACRYLATE PRODUCTION
METHYL BROMIDE PRODUCTION

INDUSTRY GROUP - PRODUCTION OF SYNTHETIC ORGANIC CHEMICALS
(Continued)

CATEGORY NAME

METHYL CHLORIDE PRODUCTION
METHYL ETHYL KETONE PRODUCTION
METHYL FORMATE PRODUCTION
METHYL HYDRAZINE PRODUCTION
METHYL ISOBUTYL CARBINOL PRODUCTION
METHYL ISOBUTYL KETONE PRODUCTION
METHYL ISOCYANATE PRODUCTION
METHYL MERCAPTAN PRODUCTION
METHYL METHACRYLATE PRODUCTION
METHYLNAPHTHALENES
METHYL PHENYL CARBINOL PRODUCTION
METHYL TERT BUTYL ETHER PRODUCTION
METHYLAMINE PRODUCTION
METHYLANILINE (N-ISOMER) PRODUCTION
METHYLCYCLOHEXANE PRODUCTION
METHYLCYCLOHEXANOL PRODUCTION
- METHYLENE CHLORIDE PRODUCTION
METHYLENE DIANILINE (4,4-ISOMER) PRODUCTION
METHYLENE DIPHENYL DIISOCYANATE PRODUCTION
METHYLIONONES (A-ISOMER) PRODUCTION
METHYLPENTYNOL PRODUCTION
METHYLSTYRENE (A-ISOMER) PRODUCTION
N-VINYL-2-PYRROLIDINE PRODUCTION
NAPHTHALENE PRODUCTION
NAPHTHALENE SULFONIC ACID (A-ISOMER) PRODUCTION
NAPHTHALENE SULFONIC ACID (B-ISOMER) PRODUCTION
NAPHTHOL (A-ISOMER) PRODUCTION
NAPHTHOL (B-ISOMER) PRODUCTION
NAPHTHOLSULFONIC ACID (1-ISOMER) PRODUCTION
NAPHTHYLAMINE (1-ISOMER) PRODUCTION
NAPHTHYLAMINE (2-ISOMER) PRODUCTION
NAPHTHYLAMINE SULFONIC ACID (1,4-ISOMER) PRODUCTION
NAPHTHYLAMINE SULFONIC ACID (2,1-ISOMER) PRODUCTION
NITRILOTRIACETIC ACID PRODUCTION
NITROANILINE (M-ISOMER) PRODUCTION
NITROANILINE (O-ISOMER) PRODUCTION
NITROANISOLE (O-ISOMER) PRODUCTION
NITROANISOLE (P-ISOMER) PRODUCTION
NITROBENZENE PRODUCTION
NITRONAPHTHALENE (1-ISOMER) PRODUCTION
NITROPHENOL (4-ISOMER) (P-ISOMER) PRODUCTION
NITROPHENOL (O-ISOMER) PRODUCTION

INDUSTRY GROUP - PRODUCTION OF SYNTHETIC ORGANIC CHEMICALS
(Continued)

CATEGORY NAME

NITROPROPANE (2-ISOMER) PRODUCTION
NITROTOLUENE (2-ISOMER) (O-ISOMER) PRODUCTION
NITROTOLUENE (3-ISOMER) (M-ISOMER) PRODUCTION
NITROTOLUENE (4-ISOMER) (P-ISOMER) PRODUCTION
NITROTOLUENE PRODUCTION
NITROXYLENE PRODUCTION
NONYLBENZENE (BRANCHED) PRODUCTION
NONYLPHENOL PRODUCTION
OCTENE-1 PRODUCTION
OCTYLPHENOL PRODUCTION
P-TERT-BUTYL TOLUENE PRODUCTION
PARAFORMALDEHYDE PRODUCTION
PARALDEHYDE PRODUCTION
PENTACHLOROPHENOL PRODUCTION
PENTAERYTHRITOL PRODUCTION
PERCHLOROETHYLENE PRODUCTION
PERCHLOROMETHYL MERCAPTAN PRODUCTION
PHENANTHRENE
PHENETIDINE (P-ISOMER) PRODUCTION
PHENOL PRODUCTION
PHENOLPHTHALEIN PRODUCTION
PHENOLSULFONIC ACIDS (ALL ISOMERS) PRODUCTION
PHENYLENEDIAMINE (P-ISOMER) PRODUCTION
PHLOROGLUCINOL PRODUCTION
PHOSGENE PRODUCTION
PHTHALIC ACID PRODUCTION
PHTHALIC ANHYDRIDE PRODUCTION
PHTHALIMIDE PRODUCTION
PHTHALONITRILE PRODUCTION
PICOLINE (B-ISOMER) PRODUCTION
POLYETHYLENE GLYCOL PRODUCTION
POLYPROPYLENE GLYCOL PRODUCTION
PROPIOLACTONE (B-ISOMER) PRODUCTION
PROPIONALDEHYDE PRODUCTION
PROPIONIC ACID PRODUCTION
PROPYL CHLORIDE PRODUCTION
PROPYLENE CARBONATE PRODUCTION
PROPYLENE DICHLORIDE PRODUCTION
PROPYLENE GLYCOL MONOMETHYL ETHER PRODUCTION
PROPYLENE GLYCOL PRODUCTION
PROPYLENE OXIDE PRODUCTION
PYRENE

INDUSTRY GROUP - PRODUCTION OF SYNTHETIC ORGANIC CHEMICALS
(Continued)

CATEGORY NAME

PYRIDINE PRODUCTION
QUINONE PRODUCTION
RESORCINOL PRODUCTION
SALICYLIC ACID PRODUCTION
SODIUM CHLOROACETATE PRODUCTION
SODIUM CYANIDE PRODUCTION
SODIUM METHOOXIDE PRODUCTION
SODIUM PHENATE PRODUCTION
STILBENE PRODUCTION
STYRENE PRODUCTION
SUCCINIC ACID PRODUCTION
SUCCINONITRILE PRODUCTION
SULFANILIC ACID PRODUCTION
SULFOLANE PRODUCTION
TARTARIC ACID PRODUCTION
TEREPHTHALIC ACID PRODUCTION
TERT-BUTYLBENZENE PRODUCTION
TETRABROMOPHTHALIC ANHYDRIDE PRODUCTION
TETRACHLOROBENZENE (1,2,4,5-ISOMER) PRODUCTION
TETRACHLOROETHANE (1,1,2,2-ISOMER) PRODUCTION
TETRACHLOROPHTHALIC ANHYDRIDE PRODUCTION
TETRAETHYL LEAD PRODUCTION
TETRAETHYLENE GLYCOL PRODUCTION
TETRAETHYLENEPENTAMINE PRODUCTION
TETRAHYDRONAPHTHALENE PRODUCTION
TETRAHYDROPHTHALIC ANHYDRIDE PRODUCTION
TETRAMETHYLENEDIAMINE PRODUCTION
TETRAMETHYLETHYLENEDIAMINE PRODUCTION
THIOCARBANILIDE PRODUCTION
THIOUREA
TOLUENE 2,4 DIAMINE PRODUCTION
TOLUENE 2,4 DIISOCYANATE PRODUCTION
TOLUENE DIISOCYANATES (MIXTURE) PRODUCTION
TOLUENE PRODUCTION
TOLUENESULFONIC ACIDS (ALL ISOMERS) PRODUCTION
TOLUENESULFONYL CHLORIDE PRODUCTION
TOLUIDINE (O-ISOMER) PRODUCTION
TRICHLOROANILINE (2,4,6-ISOMER) PRODUCTION
TRICHLOROBENZENE (1,2,4-ISOMER) PRODUCTION
TRICHLOROETHANE (1,1,2-ISOMER)
TRICHLOROETHYLENE PRODUCTION
TRICHLOROFLUOROMETHANE PRODUCTION

INDUSTRY - PRODUCTION OF SYNTHETIC ORGANIC CHEMICALS (Continued)

CATEGORY NAME

TRICHLOROPHENOL (2,4,5-ISOMER) PRODUCTION
TRICHLOROTRIFLUOROETHANE (1,2,2 -1,1,2 ISOMER) PRODUCTION
TRIETHANOLAMINE PRODUCTION
TRIETHYLAMINE PRODUCTION
TRIETHYLENE GLYCOL DIMETHYL ETHER PRODUCTION
TRIETHYLENE GLYCOL MONOMETHYL ETHER PRODUCTION
TRIETHYLENE GLYCOL PRODUCTION
TRIMETHYLAMINE PRODUCTION
TRIMETHYLCYCLOHEXANOL PRODUCTION
TRIMETHYLCYCLOHEXANONE PRODUCTION
TRIMETHYLCYCLOHEXYLAMINE PRODUCTION
TRIMETHYLOPROPANE PRODUCTION
TRIMETHYLPENTANE (2,2,4-ISOMER) PRODUCTION
TRIPROPYLENE GLYCOL PRODUCTION
VINYL ACETATE PRODUCTION
VINYL CHLORIDE PRODUCTION
VINYLCYCLOHEXENE (4-ISOMER) PRODUCTION
VINYLIDENE CHLORIDE PRODUCTION
XANTHATES (POTASSIUM ETHYL XANTHATE) PRODUCTION
XYLENE (M-ISOMER) PRODUCTION
XYLENE SULFONIC ACID PRODUCTION
XYLENES (MIXED) PRODUCTION
XYLENES (O-ISOMER) PRODUCTION
XYLENES (P-ISOMER) PRODUCTION
XYLENOL PRODUCTION

INDUSTRY GROUP - MISCELLANEOUS

CATEGORY NAME

ASPHALT ROOFING MANUFACTURE
PULP & PAPER PRODUCTION
PLYWOOD/PARTICLE BOARD MANUFACTURE
SAWMILL OPERATIONS
TIRE PRODUCTION
DRY CLEANING (PETROLEUM SOLVENT)
DRY CLEANING (CHLORINATED SOLVENTS)-COIN OPERATION PLANT
DRY CLEANING (CHLORINATED SOLVENTS)-COIN OPERATION SELF
DRY CLEANING (CHLORINATED SOLVENTS)-COMMERCIAL
DRY CLEANING (CHLORINATED SOLVENTS)-INDUSTRIAL
COLD CLEANING (GENERAL, OPEN TOP, CONVEYORIZED VAPOR DEGREASER)
FABRIC DYEING
SOLVENT EXTRACTION PROCESSES
ACRYLIC SHEETING PRODUCTION
AEROSOLS PRODUCTION
ANESTHETICS

INDUSTRY GROUP - MISCELLANEOUS (Continued)

CATEGORY NAME

BENZYLTRIMETHYLAMMONIUMCHLORIDE PRODUCTION
→ BOAT BUILDING
BUTADIENE CYLINDERS, LAB TESTING
BUTADIENE DIMERS PRODUCTION
CHELATING AGENTS PRODUCTION
CHLORINATED PARRIFINS PRODUCTION
CHLORONEB PRODUCTION
CHROMIUM ELECTROPLATING
→ COMFORT COOLING TOWERS
COMMERCIAL STERILIZATION FACILITIES
CONVEYORIZED VAPOR CLEANERS
DEODORANT PRODUCTION
DISINFECTANTS PRODUCTION
DODECANEDIOIC ACID PRODUCTION
DYES AND PIGMENTS PRODUCTION
ELECTRIC WIRING
ELECTRONICS MANUFACTURE
ETHYLIDENE NORBORNE PRODUCTION
EXPLOSIVES PRODUCTION
FLAME RETARDANT PRODUCTION
HOSPITAL STERILIZERS
HYDRAZINE PRODUCTION
? [INDUSTRIAL COOLING TOWERS
INDUSTRIAL PROCESS AIDS-ENHANCED OIL RECOVERY
ION EXCHANGE RESINS PRODUCTION
JET FUEL DEICER USE
LEATHER TANNING
LUBE OIL ADDITIVES
LUBE OIL DEWAXING
MOTH REPELLANT
OIL/GAS WELL ACIDIZING
OPEN TOP VAPOR DEGREASING
OTHER ELECTROPLATING
PAINT REMOVERS USE
PAINTS, COATINGS, & ADHESIVES: MANUFACTURE & USE
(OTHER THAN SURFACE COATING)
PHOSPHATE ESTERS PRODUCTION
PHOTOGRAPHIC CHEMICALS MANUFACTURE
PHOTOGRAPHIC FILM PROCESSING
PHTHALATE PLASTICIZERS PRODUCTION
POLYMERIZATION INHIBITORS USE
RESINS CATALYST PRODUCTION
RUBBER ANTIOXIDANTS PRODUCTION
RUBBER CEMENT MANUFACTURING
RUBBER CHEMICALS PRODUCTION
SEMICONDUCTORS MANUFACTURING
SURFACE ACTIVE AGENTS PRODUCTION
SYMETRICAL TETRACHLOROPYRIDINE PROCESS
SYNTHETIC TANNING AGENTS PRODUCTION

INDUSTRY GROUP - MISCELLANEOUS (Continued)

CATEGORY NAME

VINYLDIENE CHLORIDE COPOLYMER FABRICATION
WOOD PRESERVATION- DIRECT USE

INDUSTRY GROUP - PRODUCTION AND USE ACTIVITIES (TRIS)

CATEGORY NAME

1,1,2,2,-TETRACHLOROETHANE
1,1-DIMETHYL HYDRAZINE
1,2,4-TRICHLOROBENZENE
1,2-EPOXYBUTANE
1,2-PROPYLENIMINE
1,3-DICHLOROPROPENE
1,3-PROPANE SULTONE
1,4-DIOXANE
2,4,6-TRICHLOROPHENOL
2,4-D SALTS AND ESTERS
2,4-DINITROPHENOL
2,4-DINITROTOLUENE
2,4-TOLUENE DIAMINE
2-CHLOROACETOPHENONE
3,3-DICHLOROBENZIDENE
4,4-METHYLENE BIS
4,6-DINITRO-O-CRESOL, AND SALTS
4-AMINOBIIPHENYL
4-NITROPROPANE
ACETAMIDE
ACETONITRILE
ALLYL CHLORIDE
ANTIMONY COMPOUNDS
ASBESTOS
BENZOTRICHLORIDE
BERYLLIUM COMPOUNDS
BIS(2-ETHYLHEXYL)PHTHALATE
BIS(CHLOROMETHYL)ETHER
CALCIUM CYANAMIDE
CAPTAN
CARBARYL
CARBONYL SULFIDE
CATECHOL
CHLORAMBDEN
CHLORDANE
CHLOROBENZILATE
CHLOROMETHYL METHYL ETHER
COBALT COMPOUNDS
CRESOLS/CRESYLIC ACID (ISOMERS AND MIXTURE)
DIBENZOFURANS

INDUSTRY GROUP - PRODUCTION AND USE ACTIVITIES (TRIS) (Continued)

CATEGORY NAME

DICHLOROETHYL ETHER
DICHLORVOS
DIETHANOLAMINE
DIETHYL SULFATE
DIMETHYL SULFATE
ETHYL CARBAMATE
ETHYLENE IMINE
ETHYLENE THIOUREA
HEPTACHLOR
HEXACHLOROBENZENE
HEXACHLOROBUTADIENE
HEXACHLOROCYCLOPENTADIENE
HEXACHLOROETHANE
LINDANE (ALL ISOMERS)
MERCURY COMPOUNDS
METHOXYCHLOR
METHYL HYDRAZINE
METHYL IODIDE
METHYL ISOCYANATE
O-ANISIDINE
O-TOLUIDINE
P-PHENYLENEDIAMINE
PENTACHLORONITROBENZENE
POLYCHLORINATED BIPHENYLS (AROCLORS)
PROPOXUR
QUINONE
STYRENE OXIDE
TITANIUM TETRACHLORIDE
TRIFLURALIN
VINYL BROMIDE
VINYLIDENE CHLORIDE

ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Part 63.52]
[AD-FRL]

Preliminary Draft List of Categories and Subcategories Under
Section 112 the Clean Air Act

AGENCY: Environmental Protection Agency (EPA)

ACTION: Notice of Availability of Preliminary Draft List of
Categories and Subcategories and Request for Information

SUMMARY: This notice announces the availability of a preliminary
draft of the list of categories and subcategories required under
Section 112(c) of the Clean Air Act (CAA) as amended in 1990.

The CAA requires that "a list of all categories and
subcategories" (hereafter collectively referred to as categories)
"of major sources and area sources..." (listed under Section
112(c)(3)) of hazardous air pollutants (HAP's) be published
within 1 year of enactment of the CAA Amendments of 1990. This
notice provides the public with an opportunity to comment on the
preliminary draft list of categories prior to the publication of
the final list (scheduled to be published in November of 1991).

Facilities within these categories of sources are potentially
subject to emissions standards under Section 112 of the CAA. The
schedule for promulgation of these standards will be published
within 2 years of enactment of the CAA Amendments of 1990. The
listing of source categories in this notice is not intended to
affect how a source is defined for purposes of the early
reduction program (Section 112(i)(5)). This definition of source
is described in Section II.B. of the Proposed Regulations

new

Governing Compliance Extensions for Early Reduction of Hazardous
Air Pollutants published elsewhere in today's FEDERAL REGISTER.

[Note to FEDERAL REGISTER - if these notices are not published
concurrently, replace "elsewhere in today's FEDERAL REGISTER"
with "FEDERAL REGISTER citation for early reduction proposal."]
Today's draft list is not the final list that EPA will use as the
basis for publishing the schedule for promulgation of emission
standards in November 1992.

n2w

The publication of a list of categories of major sources and
area sources enables potentially affected sources, the public,
and regulatory agencies to understand the scope of the HAP
control program. Through this notice, the Agency solicits
comment on the preliminary draft list of categories of major and
area sources subject to standards. The Agency also solicits
comment on the procedures used to develop this list, and
alternative interpretations of the subject legislation.

DATES: Comments. Written comments must be received on or before
(30 days after publication in the FEDERAL REGISTER). Requests
for extensions to this comment period are not anticipated to be
granted, due to the limited time available for list publication.

ADDRESSES: Comments. Written comments should be submitted (in
duplicate if possible) to: Air Docket (LE-131), Attn: Docket No.
A-90-49, Environmental Protection Agency, 401 M Street S.W.,
Washington, D.C. 20460.

Docket. Docket No. A-90-49, containing supporting
information used in developing the notice, is available for

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Species profiles from EPA's Air Emissions Species Manual were applied to the VOC and PM emission estimates in NEDS in order to identify if HAP emissions are associated with a particular source category. Species profiles offer a means of estimating the weight percent of specific pollutants in an emission stream based on knowledge of the type of source category and quantity of VOC or PM emissions. Species profiles have been developed by EPA for a number of purposes including the preparation of air toxics and acid precipitation emission inventories, receptor modeling and ozone strategy development. EPA has published species factors with assigned data quality rankings ranging from A to E. An "A" quality ranking indicates the highest quality profile, based on a composite of several tests and accepted analytical techniques, and can be considered representative of the total population of sources within a category. Conversely, an "E" quality ranking indicates the lowest quality profile, based on engineering calculations from only one source or perhaps simply based on engineering judgement, and may not be considered representative of the total population of sources within a category. EPA, in preparing today's draft source category list, only employed species profiles having data quality rankings of A, B, C and D. The use of profiles with a ranking of E was not considered appropriate because of the extreme uncertainty of the applicability of these profiles, even to a single source within a source category. The use of profiles ranked D and higher was considered appropriate because EPA believes a profile need only be representative of one or several sources within a category in order to qualify that source category for inclusion on today's draft list. EPA requests comments on this approach.

D ranked profiles are based on measured emissions from a single source or engineering calculations from more than one source.

2. Categories of the synthetic organic chemical manufacturing industry (SOCMI) were identified from literature describing SOCMI reactants and products. A SOCMI category was listed if it either manufactured a chemical on the list of ~~189~~ HAP's or if it used one or more of the ~~189~~ HAP's to produce another chemical. delete
delete

3. Published production and consumption data for organic chemicals were used to identify organic chemical end user processes emitting HAP's. There are a total of five general category groupings for which such data were used: foam blowing processes, process solvent use, polymerization processes, pesticide production, and pharmaceutical production.

Production and consumption data were obtained for each chemical from readily available literature. Each end use of a chemical was identified as a category.

4. The EPA's Toxic Release Inventory System (TRIS) was a fourth source that was used to identify HAP emitters. The TRIS data base contains emissions data reported by individual industrial facilities as required under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986. Emissions data in TRIS are reported on a plant-wide basis. Standard Industrial Classification Codes are reported in TRIS but the entries are usually not specific enough to identify categories of sources. For this reason, it is difficult to use the TRIS data base for identifying categories, or to determine where there is overlap between the TRIS data base and the methods described above. The TRIS data base did, however, identify plants emitting listed pollutants not identified through the methods described above. Where this was the case, a general

"TRIS" category and the pollutant name was added to the list. Further work will be needed to identify the specific categories involved.

5. The list of categories developed by using the several data sources described above was augmented by reviewing existing studies by the EPA Office of Air Quality Planning and Standards. A major portion of this effort consisted of reviewing data developed in support of previous FEDERAL REGISTER notices describing previous Section 112 regulatory decisions. For the most part, the methods described above had already identified most of the categories. However, in some cases additional categories were identified from these references and were added to the list.

II. REQUEST FOR COMMENT

The EPA requests comment in the following areas:

1. Comment is requested on the appropriate distinctions EPA should make between categories and subcategories. In addition, information is requested for the division of listed groups of sources into categories and subcategories. All information supporting the definition of categories and subcategories should be accompanied by adequate supporting documentation.

2. Comment is requested on the appropriate approach to employ for the listing of categories of area sources and whether any source categories on the preliminary draft list are composed solely of area sources. The Agency also solicits comment on the specific findings required to fulfill the criteria for listing categories of area sources under Section 112(c)(3) (i.e., threat of adverse effects to health or the environment).

new

3. Comment is requested on the scope and completeness of the preliminary draft list of categories. Specifically, comments are requested on any additional or omitted categories or additional information about the categories on the preliminary draft list. All comments supporting the addition or removal of categories should be accompanied by adequate supporting information.

4. Comment is requested on the use of data bases noted above in identifying categories of sources as well as any additional data bases which could be used for this purpose. Comment is requested on categories and subcategories of sources included based on speciation profiles having a relatively poor quality ranking, as itemized and discussed in Table 1. new

5. Comment is requested on the appropriate alternative for listing electric utility steam generating units.

6. Information is requested for the identification of categories engaged in commercial or industrial solid waste incineration as defined under Section 129.

III. MISCELLANEOUS

Executive Order 12291 requires EPA to determine whether this action is "major" and therefore subject to the requirement of a Regulatory Impact Analysis. This action is not major because it imposes no additional regulatory requirements. This notice was submitted to the Office of Management and Budget (OMB) for review. Any written comments from OMB and written EPA responses are available in the docket. Pursuant to 5 U.S.C. 605(6), I hereby certify that this action will not have a significant economic impact on a substantial number of small entities because

TABLE 1
PRELIMINARY DRAFT LIST OF CATEGORIES OF MAJOR AND AREA SOURCES OF
HAZARDOUS AIR POLLUTANTS

Listed below are the categories of major and area sources associated with emission of one or more listed HAP's. For convenience, the list is organized by major industry groupings (e.g., polymers and resins production). The miscellaneous grouping contains categories which are not part of the other listed industry groups. The order of the categories within each industry group is based on the data bases used to develop this list not on their regulatory priority. Nothing in this notice or list shall limit EPA's ability to promulgate emission standards for an entire facility or portion thereof, regardless of the number of source categories and subcategories contained in that facility. A reference and a list of the HAP's associated with each category is included in the docket.

INDUSTRY GROUP -- FUEL COMBUSTION

CATEGORY NAME

INDUSTRIAL EXTERNAL COMBUSTION BOILERS
 INSTITUTIONAL EXTERNAL COMBUSTION BOILERS
 EXTERNAL COMBUSTION SPACE HEATERS
 INDUSTRIAL ELECTRIC GENERATION TURBINES
 INDUSTRIAL RECIPROCATING IC ENGINES
 COMMERCIAL/INSTITUTIONAL TURBINES
 COMMERCIAL RECIPROCATING IC ENGINES
 TEST ENGINE AIRCRAFT
 TEST ENGINES - TURBINE*
 TEST ENGINES - RECIPROCATING
 PROCESS HEATERS
 SECONDARY METALS PROCESS HEATERS
 PETROLEUM INDUSTRY PROCESS HEATERS
 OIL AND GAS STEAM GENERATION
 INDUSTRIAL IN-SITU FUEL USE
 PRESCRIBED BURNING
 RESIDENTIAL BOILERS
 RESIDENTIAL WOOD COMBUSTION- FIREPLACES
 RESIDENTIAL WOOD COMBUSTION- WOODSTOVES

INDUSTRY GROUP - METALLURGICAL INDUSTRY: NONFERROUS METALS

CATEGORY NAME

ALUMINUM PRODUCTION*
 PRIMARY LEAD SMELTING
 PRIMARY METALS - MISCELLANEOUS*
 SECONDARY ALUMINUM*
 SECONDARY COPPER*

INDUSTRY GROUP - METALLURGICAL INDUSTRY: NONFERROUS METALS
(Continued)

CATEGORY NAME

BATTERY MANUFACTURE: NON-LEAD TYPES
CADMIUM REFINING
LEAD ACID BATTERY MANUFACTURING
NON-FERROUS ALLOYS PRODUCTION
PRIMARY COPPER SMELTERS
SECONDARY METALS- MISCELLANEOUS
ZINC SMELTING

INDUSTRY GROUP - METALLURGICAL INDUSTRY: FERROUS METALS

CATEGORY NAME

FERROALLOYS PRODUCTION
IRON & STEEL MANUFACTURING
GRAY IRON FOUNDRIES
STEEL FOUNDRY
COKE BY-PRODUCT PLANTS
COKE OVENS
METAL SHREDDING (RECYCLING)
STEEL PICKLING

INDUSTRY GROUP - MINERAL PRODUCTS PROCESSING AND USE

CATEGORY NAME

TACONITE IRON ORE PROCESSING*
ASPHALT CONCRETE MANUFACTURE
BRICK MANUFACTURING
CEMENT KILNS*
GLASS MANUFACTURE*
STONE QUARRIES
MINING OPERATION - SAND/GRAVEL*
METAL PIPE COATING ASPHALT/COAL TAR*
ASBESTOS FABRICATING
ASBESTOS MANUFACTURING
ASBESTOS MILLING
ASBESTOS REMOVAL: DEMOLITIONS
ASBESTOS REMOVAL: RENOVATIONS
ASBESTOS WASTE DISPOSAL: DEMOLITIONS
ASBESTOS WASTE DISPOSAL: RENOVATIONS
CONSTRUCTION: SPRAYING AND INSULATION
ASPHALT PAVING AND ROOFING OPERATIONS
ASPHALT PROCESSING
AUTOMOTIVE TRANSMISSION PLATES MANUFACTURING
BRAKE PARTS MANUFACTURING
CEILING TILE MANUFACTURING
FRICTION MATERIAL MANUFACTURING
MINERAL DRYERS/CALCINERS
MINERAL WOOL PRODUCTION
ORE FLOTATION
REFRACTORIES PRODUCTION

INDUSTRY GROUP - MINERAL PRODUCTS PROCESSING AND USE
(Continued)

TALC MANUFACTURING
VERMICULITE MANUFACTURING
WOOL FIBERGLASS MANUFACTURING

INDUSTRY GROUP - PETROLEUM REFINERIES

CATEGORY NAME

PETROLEUM REFINING

INDUSTRY GROUP - PETROLEUM AND GASOLINE PRODUCTION AND MARKETING

CATEGORY NAME

OIL AND GAS PRODUCTION
GASOLINE/PETROLEUM STORAGE
PETROLEUM MARKETING (WITH BULK TERMINALS AND PLANTS)
MANGANESE FUEL ADDITIVES
NATURAL GAS STORAGE/TRANSMISSION
OIL SHALE RETORTING

INDUSTRY GROUP - SURFACE COATING PROCESSES

CATEGORY NAME

FABRIC PRINTING
SURFACE COATING OPERATIONS- GENERAL SOLVENT USES
FABRIC COATING*
PAPER COATING*
LARGE APPLIANCE*
MAGNET WIRE*
AUTO AND LIGHT DUTY TRUCK
METAL CAN*
METAL COIL*
WOOD FURNITURE*
METAL FURNITURE*
FLAT WOOD PRODUCTS*
PLASTIC PART*
LARGE SHIP*
LARGE AIRCRAFT*
PRINTING/PUBLISHING
ARCHITECTURAL
MAGNETIC TAPES

INDUSTRY GROUP - WASTE TREATMENT AND DISPOSAL

CATEGORY NAME

SOLID WASTE DISPOSAL-OPEN BURNING
SEWAGE SLUDGE INCINERATION*
MUNICIPAL LANDFILLS*
GROUNDWATER CLEANING
HAZARDOUS WASTE INCINERATION
TIRE BURNING
TIRE PYROLYSIS
COOLING WATER CHLORINATION-STEAM ELECTRIC GENERATORS
WASTEWATER TREATMENT SYSTEMS
WATER TREATMENT PURIFICATION
WATER TREATMENT-BOILERS

INDUSTRY GROUP - AGRICULTURAL CHEMICALS PRODUCTION AND USE

CATEGORY NAME

2,4-D SALTS AND ESTERS PRODUCTION
4,6-DINITRO-O-CRESOL PRODUCTION
4-CHLORO-2-METHYLPHENOXYACETIC ACID PRODUCTION
BAYGON(tm) PRODUCTION
CAPTAFOL(tm) PRODUCTION
CAPTAN (tm) PRODUCTION
CARBAMATE INSECTICIDES PRODUCTION
CHLORTHALONIL PRODUCTION
DACTHAL(tm) PRODUCTION
DICHLORODIPHENYLTRICHLOROETHANE PRODUCTION
FUMIGATION USE
GRAIN FUMIGATION PRODUCTION
METRIBUZIN PRODUCTION
PARATHION USE
PENTACHLORONITROBENZENE PRODUCTION
PENTACHLOROPHENOL PRODUCTION
R-11 (BUTADIENE FURFURAL-COTRIMER) PRODUCTION
SODIUM PENTACHLOROPHENATE MANUFACTURE
SOIL FUMIGANT USE
SPACE FUMIGANT USE
SUBSTITUTED PHENYL UREAS PRODUCTION
THIOCARBAMATES PRODUCTION
TORDON ACID PRODUCTION

INDUSTRY GROUP - FIBERS PRODUCTION PROCESSES

CATEGORY NAME

ACRYLIC FIBERS/MODACRYLIC FIBERS
NYLON FIBERS
RAYON
SPANDEX
TRIACETATE FIBERS

INDUSTRY - PRODUCTION OF SYNTHETIC ORGANIC CHEMICALS (Continued)

CATEGORY NAME

TRICHLOROPHENOL (2,4,5-ISOMER) PRODUCTION
TRICHLOROTRIFLUOROETHANE (1,2,2 -1,1,2 ISOMER) PRODUCTION
TRIETHANOLAMINE PRODUCTION
TRIETHYLAMINE PRODUCTION
TRIETHYLENE GLYCOL DIMETHYL ETHER PRODUCTION
TRIETHYLENE GLYCOL MONOMETHYL ETHER PRODUCTION
TRIETHYLENE GLYCOL PRODUCTION
TRIMETHYLAMINE PRODUCTION
TRIMETHYLCYCLOHEXANOL PRODUCTION
TRIMETHYLCYCLOHEXANONE PRODUCTION
TRIMETHYLCYCLOHEXYLAMINE PRODUCTION
TRIMETHYLOPROPANE PRODUCTION
TRIMETHYLPENTANE (2,2,4-ISOMER) PRODUCTION
TRIPROPYLENE GLYCOL PRODUCTION
VINYL ACETATE PRODUCTION
VINYL CHLORIDE PRODUCTION
VINYL TOLUENE PRODUCTION
VINYLCYCLOHEXENE (4-ISOMER) PRODUCTION
VINYLIDENE CHLORIDE PRODUCTION
XANTHATES (POTASSIUM ETHYL XANTHATE) PRODUCTION
XYLENE (M-ISOMER) PRODUCTION
XYLENE SULFONIC ACID PRODUCTION
XYLENES (MIXED) PRODUCTION
XYLENES (O-ISOMER) PRODUCTION
XYLENES (P-ISOMER) PRODUCTION
XYLENOL PRODUCTION

INDUSTRY GROUP - MISCELLANEOUS

CATEGORY NAME

ASPHALT ROOFING MANUFACTURE
PULP & PAPER PRODUCTION
PLYWOOD/PARTICLE BOARD MANUFACTURE*
SAWMILL OPERATIONS*
TIRE PRODUCTION
DRY CLEANING (PETROLEUM SOLVENT)
DRY CLEANING (CHLORINATED SOLVENTS)-COIN OPERATION PLANT
DRY CLEANING (CHLORINATED SOLVENTS)-COIN OPERATION SELF
DRY CLEANING (CHLORINATED SOLVENTS)-COMMERCIAL
DRY CLEANING (CHLORINATED SOLVENTS)-INDUSTRIAL
COLD DEGREASING
FABRIC DYEING*
SOLVENT EXTRACTION PROCESSES
ACRYLIC SHEETING PRODUCTION
AEROSOLS PRODUCTION
ANESTHETICS

INDUSTRY GROUP - PRODUCTION AND USE ACTIVITIES (TRIS) (Continued)

CATEGORY NAME

DICHLOROETHYL ETHER
DICHLORVOS
DIETHANOLAMINE
DIETHYL SULFATE
DIMETHYL SULFATE
ETHYL CARBAMATE
ETHYLENE IMINE
ETHYLENE THIOUREA
HEPTACHLOR
HEXACHLOROBENZENE
HEXACHLOROBUTADIENE
HEXACHLOROCYCLOPENTADIENE
HEXACHLOROETHANE
LINDANE (ALL ISOMERS)
MERCURY COMPOUNDS
METHOXYCHLOR
METHYL HYDRAZINE
METHYL IODIDE
METHYL ISOCYANATE
N,N-DIETHYLANILINE
O-ANISIDINE
O-TOLUIDINE
P-PHENYLENEDIAMINE
PENTACHLORONITROBENZENE
POLYCHLORINATED BIPHENYLS (AROCLORS)
PROPOXUR
QUINONE
STYRENE OXIDE
TITANIUM TETRACHLORIDE
TRIFLURALIN
VINYL BROMIDE
VINYLIDENE CHLORIDE

*These source categories and subcategories were considered for inclusion on this draft list based, in part, on speciation profiles of relatively poor quality ranking (i.e., they are based on measured data from a single facility or process or from a number of facilities or processes based on engineering calculations).